



College AND UNIVERSITY Business

NOVEMBER 1952: Businessmen Go to College • What Records to
Retain • Purchasing Reports to Top Management • Discipline by
Committee • Budgeting for Maintenance • Control of Food Dollar

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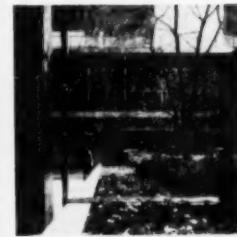
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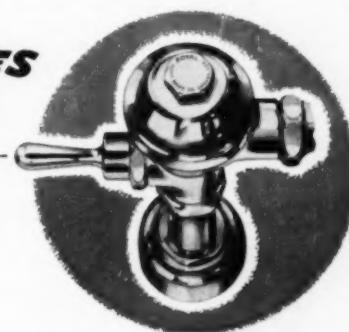
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NOVEMBER 1952

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Gordon C. Lund

Not many public relations men switch to theology but that is just what GORDON C. LUND, author of our lead article on page 19, has done. As director of publicity at Wittenberg College, Gordon Lund describes that college's successful new service to local business and industry—an achievement other schools may well want to emulate inasmuch as they are turning increasingly to business and industry for financial support. Mr. Lund started work as news service editor at Texas Christian University, hopped to a big city public relations agency, thence to communications for the air force in Cuba, India and China, and returned to civilian life as a newsman for Illinois Tech and Midland College. Right now he is carrying 13 semester hours in the Hamma Divinity School at Springfield, Ohio, while directing publicity for Wittenberg College.



Eugene W. Dils

Stanford University does a placement job for its students as well as its alumni, and the job of getting jobs for both groups is handled by EUGENE W. DILS (p. 21). Mr. Dils went to Stanford in 1948 as resident counselor of Stanford Village, an off-campus student housing facility, and became director of placement service the following year. He was associate dean of students and chairman of the placement policies committee at Washington State College for a time; he also served seven years as director of junior employment and counseling service for the Seattle public schools.



Herbert P. Wagner

Ask the man who's survived one and he'll tell you that an investigation is a shattering experience. Since politicians will be politicians, no institution is immune from that threat. In such dire event, the honest college administrator's best defense is a good record system. The specter of investigation is only one of several sound reasons for the preservation of financial and academic records. HERBERT P. WAGNER of the University of Michigan discusses what records to preserve and what may safely be discarded on page 24. Mr. Wagner has been at Michigan since he was graduated in business administration in 1921.

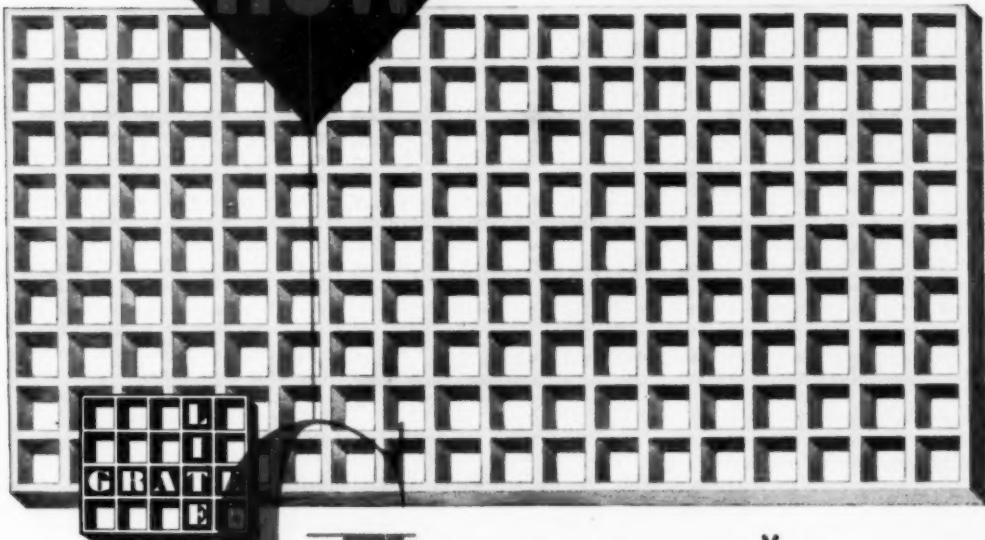


Alta B. Atkinson

Beginning in this issue is a series on tools for food service control written by ALTA B. ATKINSON, manager of food service and instructor in home economics at Teachers College, Columbia University. The first article will be found on page 42. Miss Atkinson won her B.Sc. at Montana State College, Bozeman, and her M.A. at Teachers College. Her food service career is impressive: assistant manager, University of Washington Commons; house director and later manager of the Michigan League, University of Michigan; administrative dietitian, New York Hospital, and manager of the commons at Hunter College. . . . As associate in education research for the State University of New York, LOUIS H. CONGER JR. has done a series of studies on college student finances, fees and the like. On page 48 he reports on a study of student expense and income in New York State. Mr. Conger took his B.S. and M.A. at Harvard and is now an Ed.D candidate at Teachers College, Columbia University.

new

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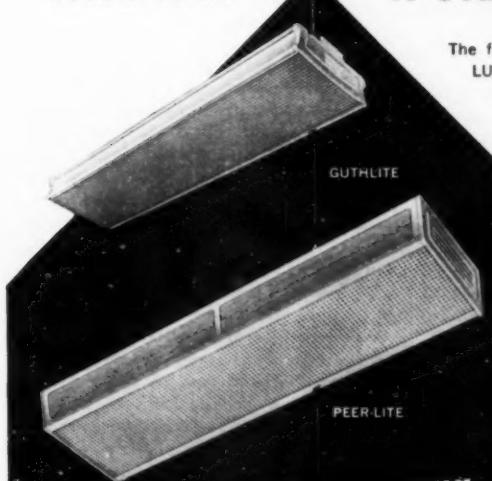
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Questions and Answers

Special Fees

Question: Are special fees or deposits (breakage, keys, laboratory, library) economical? Can the expense of maintaining records of such fees be justified?—P.S., Ohio.

ANSWER: Many institutions have raised their tuition charges to include special fees and deposits such as are often charged for breakage, laboratory, library and health. The effect of such a charge is to reduce the amount of and the expense of record keeping. This change also has the effect of helping parents and students calculate the cost of an education. This change also tends to put students on an equal financial basis whether they major in chemistry, history or some other subject as the total tuition would be the same for an undergraduate in any course. An apparent increase in tuition, which includes these fees, can be made more easily in an inflationary period, such as we have now, than during a deflationary period.

If it does not seem possible to follow this plan, a recording plan can be devised that would be economical when the fees are above \$2 or \$3. The business office should have a simple card system for recording these deposits. They can be paid out through petty cash when refunds are made. A single account may be kept for each kind of deposit or fee and an alphabetical card system may be used for the subsidiary record.

Key deposit records can be justified, for students only, even when the expense of the recording may be larger than the deposit. Many institutions issue few if any keys to students because of the risk involved. The keys may be duplicated, misplaced or lost. Then there is the risk of the "locked door" being unlocked by an unauthorized person or the expense of changing the locks. In some cases, the cores can be removed or exchanged at a lower cost. If it seems necessary to issue keys to students it would seem economical to require a reasonably large deposit, such as \$1, in order to make it worth while for students to care for the keys

and return them at the proper time. This plan also may help in training students in "responsibility" if they return keys, even though the financial motive may have caused the proper action. Keys should be issued to faculty and staff and recorded on a card file. These should be issued without deposit.—ROBERT FENIX, *business officer, Willamette University*.

Faculty Housing

Question: To what extent should an institution supply housing for its staff?—C.D., Mass.

ANSWER: The question as to what extent an institution should supply housing for members of its staff presents a serious problem in most institutions today. Unfortunately there is no ready answer to this problem. The decision must rest in the hands of the institution itself, with consideration given to the local housing situation, the need for college owned housing, rental rates, and the extent to which an institution wishes to subsidize its housing program. Normally on today's real estate market it is impossible to develop a housing program that can be operated to return a reasonable amount for interest and amortization on an investment of this nature.

Several institutions have followed the practice of financing the purchase of housing by staff members over a long-term period at an interest and amortization rate that they can afford

to pay. Others have purchased housing and rented to staff members at a lower rate than the going rental charge in the community.

In approaching this problem a survey should be made of the needs for housing, the capacity of staff members to pay the necessary rental charges, and whether or not the institution feels it must assume any responsibility for housing its staff. A recent survey of housing failed to disclose any institutions that have reached a satisfactory solution to the problem of staff housing.—IRWIN K. FRENCH, *business manager, Wellesley College*.

Purchasing From Alumni

Question: How do you avoid alienating the local alumnus when the institution does not purchase commodities or services from his organization?—R.L., Mich.

ANSWER: The local problem differs with each institution and in all cases seems to be one requiring diplomatic handling in order to avoid misunderstandings. If one does his purchasing on a competitive basis, there seems to be little reason for anyone to take exception to the procedure if the alumni have confidence they are being treated fairly.

All alumni, as well as people of the community, should realize that the first duty a purchasing agent has is to spend his institution's funds wisely. This would not permit his paying a premium to local people or to alumni unless a policy were established to pay a certain small premium in such cases. Also, under competitive bidding, the bids may be equal and the purchasing agent is then required to choose the successful bidder on the merits of service, relationship, and such things.

An alumnus who feels he is alienated under a sound, fair business practice has probably not been properly informed or does not have sufficient confidence in his institution. A sound policy and good public relations must go hand in hand.—K. A. JACOBSON, *purchasing agent, California Institute of Technology*.

If you have a question on business or departmental administration that you would like to have answered, send your query to COLLEGE and UNIVERSITY BUSINESS, 919 North Michigan Avenue, Chicago 11, Ill. Questions will be forwarded to leaders in appropriate college and university fields for authoritative replies. Answers will be published in forthcoming issues. No answers will be handled through correspondence.

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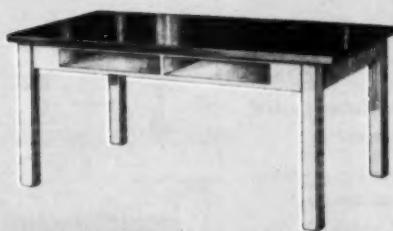
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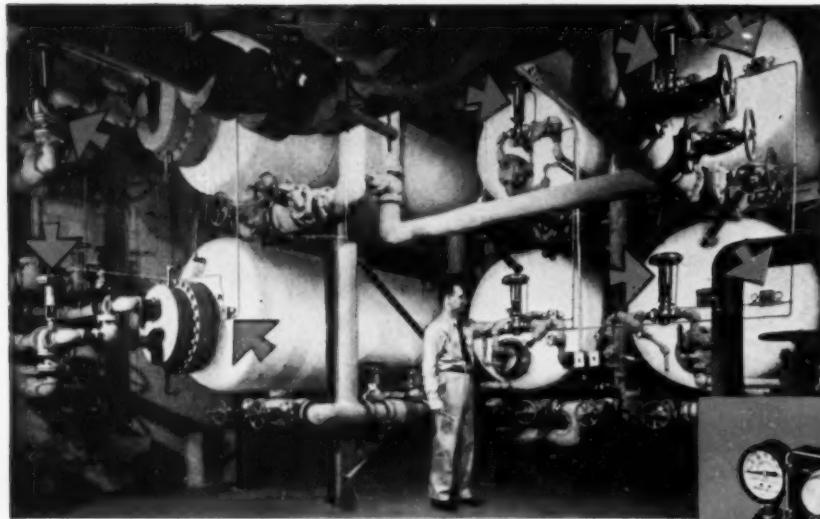
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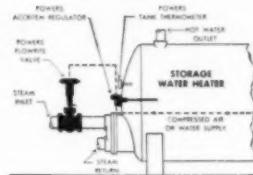


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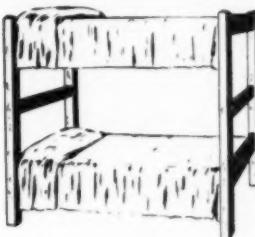
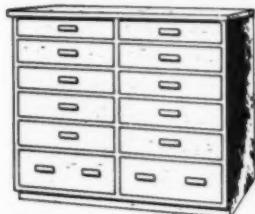
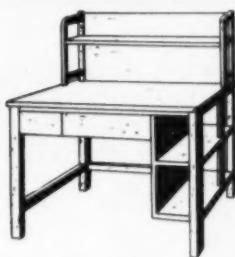
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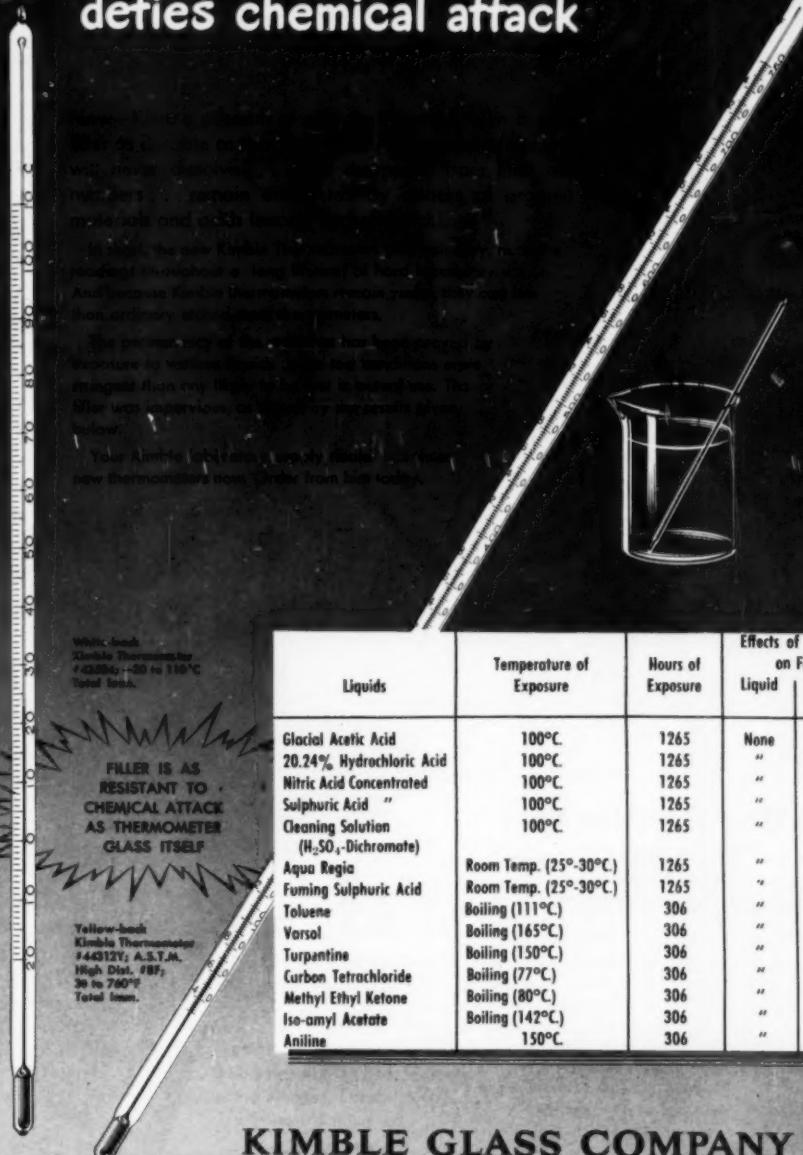
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| Liquids | Temperature of Exposure | Hours of Exposure | Effects of Exposure on Filler Liquid Vapor | |
|---|-------------------------|-------------------|--|------|
| Glacial Acetic Acid | 100°C. | 1265 | None | None |
| 20.24% Hydrochloric Acid | 100°C. | 1265 | " | " |
| Nitric Acid Concentrated | 100°C. | 1265 | " | " |
| Sulphuric Acid " | 100°C. | 1265 | " | " |
| Cleaning Solution (H ₂ SO ₄ -Dichromate) | 100°C. | 1265 | " | " |
| Aqua Regia | Room Temp. (25°-30°C.) | 1265 | " | " |
| Fuming Sulphuric Acid | Room Temp. (25°-30°C.) | 1265 | " | " |
| Toluene | Boiling (111°C.) | 306 | " | " |
| Versol | Boiling (165°C.) | 306 | " | " |
| Turpentine | Boiling (150°C.) | 306 | " | " |
| Carbon Tetrachloride | Boiling (77°C.) | 306 | " | " |
| Methyl Ethyl Ketone | Boiling (80°C.) | 306 | " | " |
| Iso-amyl Acetate | Boiling (142°C.) | 306 | " | " |
| Aniline | 150°C. | 306 | " | " |

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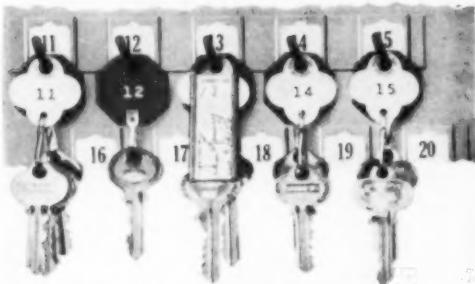


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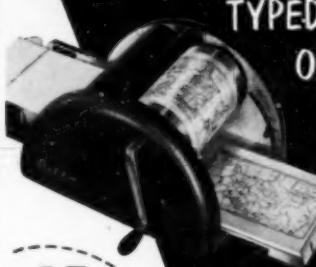
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WISCONSIN chooses *Simmons* Metal Furniture



A salute to the Wisconsin Board of Regents of State Colleges

...for an aggressive, long-range building program. Six student dormitories, each with 43 double rooms accommodating 84 students, have already been completed at Platteville, Stevens Point, River Falls, La Crosse, Superior and Oshkosh.

Following a precedent established when Simmons metal furniture was selected to furnish the University of Wisconsin dormitories — as well as state hospitals

and other institutions — these six dormitories also are Simmons equipped.

A wide range of color schemes, with Dove Green and Grey predominating, provides colorful and stimulating room settings.

Significantly, the economy of Simmons steel furniture is again emphasized in low upkeep cost assured by long-lasting, mar-resistant, fire-safe *Simfast* finishes. And, of course, good looks!

Large illustration: Dormitory Room No. 158 with its compactly designed Duet Desk F-142-21. Each student has own drawer and book shelves. Other pieces are: Chest F-142-24, with Mirror FM-42; Chairs F-711, Arm Chair F-762; Night Table F-142-14. Below: Single Desk F-142-11.



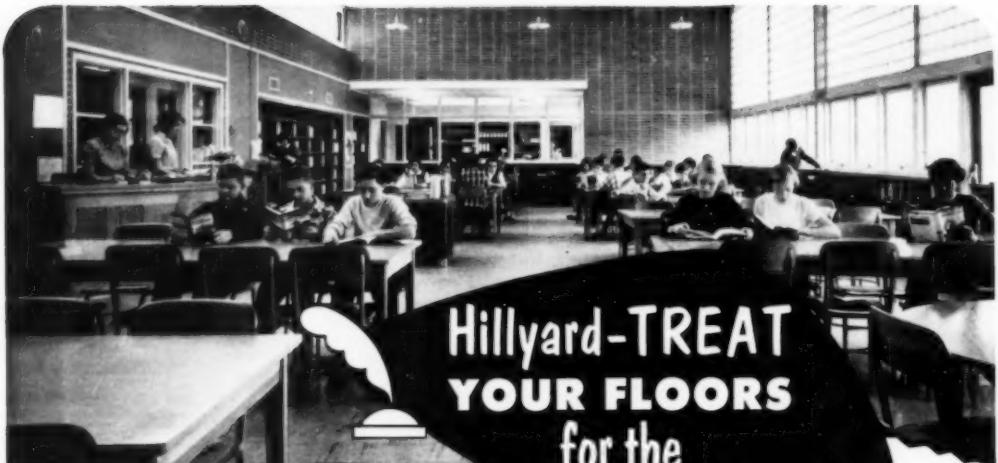
Illustrated above: Single Desk F-142-11.

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IS THIS CONVENTION NECESSARY?

PAUL R. ANDERSON

President, Pennsylvania College for Women



MOST OF US REALIZE THAT ONE OF OUR SALIENT American sins, academic as well as otherwise, is overorganization. One person gets an idea. He finds a few others who happen to share it. Before you know it a new organization has come into being, a constitution has been written, officers have been elected, and a meeting place has been set. One more convention has been born.

If organizations were as easy to abolish as they are to set up no serious problem would exist. But, unfortunately, they have a way of perpetuating themselves. The conscientious originators quickly find that funds are necessary. Individual and/or institutional memberships are decided upon and a campaign for membership is under way. Pressures are brought to bear to get broad representation. "All progressive people will want to belong." "All of our first-rate institutions will want to support it." Pressures of friendship, departmental and institutional pride, and of course the "free ride" at institutional expense all have their influence. Once under way the cycle repeats itself year after year as each succeeding set of officers tries to outdo its predecessors in organizational effectiveness. The result is that there is no normal number of conventions, there is simply an ever-increasing number. This conventionitis must stop.

No one can question the value of occasional attendance at conventions. For the individual it provides a renewal of friendships, possible enlightenment and stimulation, and, best of all, a "breather." For the institution it lessens departmental or individual complacency and sterility, for if one new idea is forthcoming it is well worth the investment of time and money. But these hopeful outcomes decrease in likelihood in proportion to the fragmentary character of the meetings and the frequency of one's attendance.

Frontal attack on this problem consists of (1) widening the scope of some conventions in the hope of eliminating others, and (2) encouraging limitation on the number of conventions an individual will be permitted to attend at institutional expense. In regard to the first of these, few will doubt that the programs are dull, pedestrian, and overly specialized.

The only real justification for our educational conventions is to improve higher education. Improvement will come not by further formalizing our already too compartmentalized education through the programming of conventions but by humanizing these conventions and increasing their scope. Most people in higher education have less need for enlightenment on technical matters within their own fields than they have for educational vision and perspective. This will come in part as we make conventions more meaningful and important.

A few conventions per year that lift our sights above the routine would do more good than a multitude devoted to special interests. Just how we can accomplish this objective is not clear. Perhaps we shall have to take the lead from what has been done in the field of accreditation. There have been too many agencies in accreditation, so we have a commission to simplify procedures. We have too many conventions, so we may have to set up an overall screening instrument.

If we can't change the character of conventions immediately we can at least refuse to support them. It is difficult to see the necessity for attendance at more than one convention a year on the part of any but two or three people on the average campus. If our institutional budgets were set up on the basis of supporting only one trip a year for each major faculty member and for most administrative officers, this in itself would cut attendance at meetings to the point at which many programs would have to be combined or eliminated.

If we were to go even further and offer a set stipend to each staff member to be used *either* for attendance at meetings or for some other worthy "refresher" of his own choice, there is little doubt but that attendance at the questionably profitable conventions would fall off considerably. By this process we might have not only fewer conventions but ultimately better ones.

In the meantime we can slow down the multiplication of conventions by trying to make some few conventions really good and by screening the applications of ourselves and others through asking the question, "Is this convention necessary?"

Looking Forward

Federal Aid?

WHEN THE NEW CONGRESS CONVENES, COLLEGE administrators can be assured that the matter of federal aid to education will be debated again. In view of the recent vigorous attempt by some private colleges to modify the new G.I. bill, it appears unlikely that new federal aid proposals will be attacked as critically as they were before. Apparently the private colleges have no aversion to federal aid to higher education, judging from recent behavior.

Such a development among the independent colleges would be most unfortunate. For years they have been in the van of educational pioneering, and it is disturbing to note their willingness, and oftentimes actual eagerness, to dip into the federal bucket and ladle out a portion for themselves—at least indirectly, if not by direct appropriation.

Too Busy?

IT'S RATHER ALARMING TO NOTE THE FREQUENCY with which college administrators shrug off opportunities for self-improvement with the lame excuse, "I'm too busy."

If the college business manager hopes to achieve the status of a professional person, and all that being a member of a profession requires, he had better begin soon on his program of professional growth. One of the first steps is to set up a work schedule that will allow him time for graduate work. It's ironical that in a community of scholars many administrators of business operations think graduate study is for faculty and students only. Additional formal education would be a real help to a large number of college business officers.

Many administrators on the business side of college administration are just drifting. Apparently they have no professional goal in mind, are satisfied with the job they are doing, and hope that the crises they are expected to solve will be infrequent. Is it any wonder that in such a situation the faculty considers the business office a necessary evil?

Institutes, workshops and other intensive short course efforts are to be commended, but attention also must

be given to establishing a formal course of study that might be considered "required material" for a person planning on a career in college business management. The National Federation of College and University Business Officers Associations might well find it advisable to develop a suggested curriculum for those planning a career of college business administration and also a supplementary course for those already active in administrative work. The University of Omaha has taken a substantial step in the direction of formal graduate work for college administrators, and its efforts should receive encouragement and recognition from business officer organizations.

The time when an individual could stumble into a college business administrator's position should be long past. The responsibilities for operating the business phase of a college or university are such that trained men are needed for the unusual requirements of the job. The present hit and miss practice of recruiting college business administrative personnel does not reflect credit on a group of men and women who like to think that they have achieved the status of a profession.

Kudos for Cupa

CONGRATULATIONS ARE IN ORDER FOR THE COLLEGE and University Personnel Association in its effort to open its conference sessions to other than personnel directors. By recent executive action the board of C.U.P.A. has added to the mailing list of its organization the names of the officers of college administrative organizations in order that better understanding of personnel problems might be achieved.

In addition, invitations have been extended to officers of other organizations to attend the annual meetings of the College and University Personnel Association as observers. The strict channeling of activities within various administrative fields tends to develop specialists in the college hierarchy who have little understanding or sympathy with the other fellow's point of view. A meeting of minds on difficult issues should certainly tend to make for administrative harmony and cooperation. It's worth a try.

A typical class in management development listens to a lecture.



This college serves local

BUSINESS AND INDUSTRY

THE DAY WHEN A COLLEGE COULD live in isolation from its community, academically "sealed off" from the faster tempo of commercial and professional affairs, long since has passed, if, indeed, there really ever was such a day.

Wittenberg College, 107 year old Lutheran institution in Springfield, Ohio, never had tried to live that kind of sheltered life. Culturally, at least, it has played an active rôle in Springfield community life almost since that day in 1845 when four students constituted its first student body. Yet it was a totally new approach to the college's relationship to its community when Wittenberg's board of directors last year authorized the administration to initiate a broad community education program.

The approach was unique in thinking in terms of specific and varied training programs to meet the needs of business, industry and commerce.

GORDON C. LUND

Director of Publicity
Wittenberg College, Springfield, Ohio

In effect, the college's buildings and facilities were thrown open to the business world, and the skills of whatever faculty members might be required were dedicated to helping industry solve its training problems.

As a result, Wittenberg had a "second student body" nearly equal in numbers to its regular undergraduates in the 1951-52 school year. More than 800 men and women from industry, most of them supervisory personnel, studied in two programs that constituted the first major steps in the broad community education scheme: (1) the management development program, and (2) the business executive program.

The first is an intensive program, in which foremen, department heads, and other supervisory employees take

a 40 hour one-week course of economics, company operations, human relations, and personal development. In groups averaging 25 per week, they spend full time on the campus with salaries, as well as tuition, paid by their employers.

The second is an extended program in which younger executives, regarded by their firms as good prospects for top management positions, attend classes one full evening a week for two calendar years, studying introduction to business, economics, accounting, marketing, salesmanship and industrial management.

Both programs were designed to make employees more effective on their present jobs and prepare them for promotion to the next higher level in the management structure.

A third phase of the total community service plan, launched in April, is similar to the two industrial programs in approach and purpose but

in a completely different area—a school of theology for laymen. It was designed to make lay leaders more effective in church work and train other laymen to assume leadership functions in congregational activities.

The management development program actually was the starting point of the broader total community program of which it is a part. It was born of the "marriage" of two unrelated problems: Wittenberg faced a deficit in its operating budget, along with most independent colleges caught between rising prices and falling enrollments. Springfield industry, meanwhile, faced a shortage of management level personnel when defense needs upped the production quotas.

College and industrial leaders got together to try to work out some means of helping each other solve their problems, with the result that the management development program took embryo form, and around it tentative plans were laid for the other phases of the total community plan.

First step was the appointment of Dr. Gerald Saddlemire as director of community education. A specialist in personnel administration, Dr. Saddlemire had been at Wittenberg for two years as assistant professor of psychology and director of counseling. He retained both positions but gave up his undergraduate classes when total responsibility for the new community education program was assigned to him.

Informal talks, meanwhile, between a Springfield industrial leader and Wittenberg's president, Clarence C. Stoughton, produced the general out-

line of the management development program. Content and procedure of the program were worked out by Dr. Saddlemire, Dr. Stoughton, and a committee of industrial executives. Total cost of the program to industry was approximately \$125,000 last year, of which about \$25,000 went to the college for tuition.

Most of the students were foremen, department heads and other supervisory personnel of the participating companies. Some, however, were non-supervisory employees being prepared by their firms for advancement as industrial expansion increases the number of management positions.

The program's course content was planned with emphasis on practicality—but nonetheless it maintains college level academic standards. The most up-to-date teaching techniques are utilized, including videograph, motion pictures, and student participation procedures. Classes are organized and conducted in "conference room" manner.

Seven objectives of the program are stressed by both college officials and industrial leaders:

1. To give supervisory personnel an understanding of their rôle as leaders.
2. To help them realize and develop their own potential in areas of self-expression.
3. To help them explore the "human element" of their jobs and gain a better understanding of the emotional problems of the working man.
4. To help them see their places as members of the management team.
5. To give them a better understanding of the basic principles of

the American business system and the threats now endangering its existence.

6. To provide a setting in which supervisory personnel from various plants can exchange ideas and share problems.

7. To enhance the prestige of the supervisory position.

A unique development that grew out of rather typical circumstances, the management development program might have sprung up in any one of the country's many cities. Both Wittenberg's situation and that of Springfield industry are the rule rather than the exception today.

Although it will probably be years before any survey could measure the program's specific results—in terms of its graduates' performance on the job—the participating companies and the supervisors themselves, as well as the college, are pleased with the way the project has worked out.

Industrial leaders, who themselves took the course in digest form just before the classes began, are confident the program will produce a reservoir of management personnel that would require years of on-the-job experience.

The business executive program had 22 junior executives from a 74 year old Springfield manufacturer of electrical equipment in its first class, which was a 16 week study of "introduction to business." Instructor for this phase was Dr. Daniel T. Krauss, head of Wittenberg's business administration department. Initial procedure, organization and curriculum for the business executive training program was planned by three Wittenberg officials and four from the company.

OUTDOOR SESSION



WE PLACE STUDENTS,

as well as alumni, in jobs

EUGENE W. DILS

Director, Placement Service
Stanford University, California



Eugene W. Dils shown interviewing graduate student of school of education at Stanford University.

IN THE DAYS OF THE "RACCOON COAT, ukelele playing" college student the average university played a four-year rôle in the life of the student. The popular conception in the good old days was that Joe College spent a carefree four years filled with football games and proms. Not much thought was given to the important part the school played in the future of its students. Perhaps this conception was right but as the years have gone by college increasingly has become a requirement in the complex and specialized economic structure we are all familiar with now.

A majority of the students today plan their high school courses to meet the requirements of college, realizing that competition with their fellow man will demand far more training than in their fathers' day. True, the college student lives a life envied by many for its social enjoyment, but the increasing enrollment has made the maintenance of high marks essential to receiving a degree.

A few students go to college for further training so that they can continue a business developed by their father or some other relative, but the great majority choose a field of training and upon graduation find employment without the help of friends or relatives. In many cases a student trains for four years in one field and then, through necessity, seeks employment in an entirely alien field.

Realizing that many students were entering fields in which they had no training merely because they had no contacts in the work of their choice, Stanford University has expanded its vocational guidance and placement

service to be of maximum assistance to students and alumni. We feel that it is useless to train for a vocation and then not have an opportunity to work at it. Our service has two aims: to help employers interested in university-trained persons to find the best possible candidates for positions in their firms, and to help Stanford students and alumni in the choice of an occupation.

Our service has increased tremendously in the past few years. During the year 1945-46, 1184 persons sought aid as compared with 3192 who sought placement assistance in 1951-52. New or better jobs were obtained for 1215 persons in 1951-52. Increased employer interest is shown by the fact that 379 employers visited the campus in 1951-52 to interview students. Nearly 8000 job openings were listed with the service, 6584 confidential employment references were sent to employers, and 14,000 notices were sent to students about jobs.

INSTALL CARD INDEX SYSTEM

With this tremendous increase in our operation it was necessary to install a system that could handle the growing number of students and employers looking to us for assistance. After much research and deliberation we found a card index system that gave us a signal control we needed and, in addition, greater flexibility and a larger posting area than our former method.

When the applicant completes his registration in the placement service, his educational experiences, work experiences and desires are reflected in the classification code numbers assigned

him. Classification tabs are made out by the interviewer and placed in a visible card index file. When orders are received classifications are determined and we make a selection of candidates by running down the file and pulling the cards of those people who are presumed to have the qualifications called for in the employer's order. After the first rough selection a more careful selection is made before confidential papers are presented to the employer. This system has facilitated the job of selecting qualified candidates.

Vocational guidance is available to students and alumni through testing and counseling. Alumni who seek assistance have available to them job listings maintained by the service. The widespread opportunities we have been able to present are best illustrated by some positions recently filled through the facilities of the placement service. We have been able to place a sales manager for a Chicago manufacturing company, a lawyer for the credit department of a large oil company, an assistant manager for a large coastal property, workers for later assignment as supervisors in a new industrial plant, an electronics engineer with training in chemistry for a vacuum-tube manufacturer, an engineer with a commercial pilot's license for sales promotion of airport equipment, and sales trainees for a West Coast distributing organization.

Not only have we been able to assist our seniors and graduates in finding employment, but at the same time through our placement service we have added to the prestige of Stanford University in the business world.

IT IS IMPORTANT THAT PURCHASING departments of educational institutions render reports to top management. Not only is it essential that higher authority have factual data of purchasing department operations but it is fitting and proper for us as college purchasing agents to bring into proper perspective the scope and extent of our departmental activities.

Reporting is a matter of communication. Such reporting can and should take a number of forms, though it is generally classified as informal and formal reporting. Each operating day there should be oral reporting by frequent personal contact between executive and subordinates, by periodic staff meetings between executive and subordinates, or simply by telephone.

Frequent informal reporting tends to produce an easy relationship which in turn creates an open atmosphere for the communication of information bilaterally, or, in other words, down as well as up through the channels of authority. In sum total, by these several devices, the executive is provided with much information essential to him in coordinating and integrating the overall operations of his institution.

Formal reporting may be accomplished on a periodic or on an annual basis. It is perhaps desirable to make reports periodically as progress reports to cover a specific phase or part of our activities, as for example upon the completion of purchase of equipment for a new residence hall or an extensive alteration. A formal summary of the more important matters involved, including a breakdown of costs and other information, would be most helpful to top management as a matter of record or for possible future operations.

The communication of information or intelligence to higher levels of authority is a universal problem. The executive is under great pressure to get many things done; therefore, his time is limited. Then, too, we must recognize that the human factor provides many variables. The following is a quotation from a book by Learned, Ulrich and Booz entitled "Executive Action" published by the division of research, Harvard Graduate School of Business Administration: "The problem of becoming well informed varies with each executive. Some executives are very anxious to obtain all available

From an address at the annual meeting of the National Association of Educational Buyers, Washington, D.C., 1952.

PURCHASING REPORTS to top management

EMIL H. EISENHARDT

Director of Purchases
New York University

appraisals, opinions and statistics about operations. Other executives assume that they are well informed if they read routine reports. Still others spend much time and effort in collecting special information. Some executives are able to anticipate developments while others are frequently surprised by the turn of events. A few facts skillfully interpreted are often more meaningful to an executive than a large mass of undigested data."

A formal annual report should be concise, inviting in form and easily read, and the subject matter should be interesting and persuasive. We can then be sure that the material will be read and analyzed. The report should be timely so as to gain something more than casual reading. It should employ the usual principles of rhetoric and diction for clearness. The report should be adapted to the intelligence, educational background, and experience of the person to whom it is submitted. Facts should be presented accurately and objectively, rather than subjectively. In other words, facts should be stated as they are rather than as we interpret or desire them.

To give life and meaning to a formal report of the activities of the purchasing department, the data used should be compared with criteria already established. Not only should we provide information on the activities for the particular period just past, for example, but comparisons should

be drawn with our experience in similar past periods. Such comparisons will indicate trends. Without such contrasts, a report may provide a collection of figures with relatively little significance. This, then, requires an adequate record and a positive pattern of control.

Therefore, it is necessary as a first step that we develop a system for the collection of data on operations that will be simple and essentially automatic in its functioning. This, in turn, will provide historical information for comparison from period to period. It is apparent that any trends thus indicated, when measured against the overall situation of a particular institution, will provide a good indication as to whether or not our purchasing department operations are in step.

The more important factors that should be recorded in our daily operations are as follows:

1. The number of purchase requisitions received.
2. The number of purchase requisitions completed.
3. The number of purchase orders issued.
4. The number of purchase orders completed and sent to file.
5. The number of invoices processed for payment.
6. Dollar value of invoices processed for payment.
7. Cash discounts taken.

If it serves our particular purpose we also may add several other items



One person can assume responsibility for keeping a statistical record.

of lesser importance, such as income from scrap sales, the total value of requisitions received, and the number of visits by sales representatives. This, of course, requires daily statistical record keeping.

At first observation it would appear that to accomplish this type of reporting much time would be consumed merely in collecting and recording the data. However, once the system is established and set in motion it becomes automatic and requires little time and effort on the part of the clerical staff. One person can assume responsibility for keeping a statistical record and spend a fraction of her time on it, while others simply furnish the required information concerning their particular activity each day.

STIMULATES STAFF'S INTEREST

It has been our experience that in the aggregate the time consumed each day is a matter of a few minutes for each person to tally and report the day's activities. Such time is more than well spent, not only because of the data that are available when needed but because the report is a sure-fire device for maintaining departmental controls. It also is a factor in stimulating the interest of the staff in the daily box score.

We should carefully explain to the staff, however, that there is no desire on our part to check on the output of the individual, but that this record is a sum total of daily departmental busi-

ness. By so doing we emphasize that we are not employing it as a device to coerce the staff into greater efforts; accordingly, we ensure complete cooperation. In fact, with this stimulation of interest we play upon the pride of the individual to a point of voluntary and greater accomplishment; it supplies an objective or goal where heretofore none may have existed. This, however, is of secondary importance.

CLOSELY INTERRELATED

As we keep our daily record of business, we can observe the extent to which the various factors enumerated earlier are keeping abreast with one another. Certain of these factors are closely interrelated; for example, the number of requisitions completed should obviously keep pace with the number of new requisitions or our backlog of requisitions in process will increase. Similarly, purchase orders completed should keep pace with new purchase orders issued. If they do not coincide we can quickly determine that operations are out of balance. We can then search out the cause and take prompt corrective measures.

At the end of a specified period, preferably each month, the daily figures can be totaled for a summary of the operations for that period. At the end of the year, we can then total the monthly figures to obtain the summary for the year. If desired, these figures can be translated into graph form to

provide a visual presentation for easy analysis, with explanatory annotations where necessary. Any element then out of balance will be more positively highlighted.

These records should be the basis, the hard core of our report to higher authority. We can then easily and quickly incorporate these data, which have been thus consolidated, into a comprehensive picture of our operations, which may be factually and concisely presented. The possibility, then, that management will make use of the report will be considerably enhanced and obviously the value of formal reporting can be gauged principally upon the use to which it is put.

One of the chief reasons in support of formal reporting advanced by Stuart F. Heinritz in his book on purchasing is as follows: "Management will be made aware of the purchasing department and will be inclined to make fuller use of its potential service and to extend more positive support so that these potentialities may be more fully realized. Management is not always conscious of what the purchasing department does and is called upon to do in the regular course of business, much less what it might accomplish, an ignorance that is unfortunate for both parties." It may be said that Mr. Heinritz may have had industrial purchasing departments in mind when making this statement. However, it is easy to see that this likewise can apply to purchasing departments of educational institutions.

If other auxiliary activities, as for example the receiving and stores department, are a part of the purchasing department, a record of their operations may be similarly kept and incorporated into the report.

MEASURING DEVICES

To summarize, the purchasing department should submit a formal report annually to higher authority, as part of its obligation, engendered by a delegation of authority to it by management. Furthermore, if these data are not furnished by the purchasing department, the executive may obtain the information from other sources, though not as easily obtainable, at greater consequent cost. Finally, by so doing, we provide management with a measuring device of considerable magnitude for use in current operations and, at the same time, as a basis for the establishment of criteria for future operations.



It is not uncommon for two sub-departments to maintain duplicate sets of records because neither department head wants to go to the other department for information.

Records— to destroy or to retain ?

IN THESE TIMES OF ECONOMIC stringency resulting from inflation, decreasing enrollments, and similar causes, educational administrators well might review the existing policies of their respective institutions relating to the maintenance and preservation of various financial and academic records. Such a review perhaps could be divided into the following categories:

1. Are the various records maintained throughout the institution from

HERBERT P. WAGNER
Business Manager, University Food Service
University of Michigan

day to day of sufficient value to warrant their continuance?

2. Is it necessary to retain such records indefinitely either by filing them permanently or by some method of reproduction?

To the reader familiar with the intricacies of the larger modern educa-

tional institutions these two problems have many ramifications. No effort is made here to cover all phases of these problems, but rather to suggest certain guides in making decisions. Perhaps some of the points set forth may seem too obvious, but often it is the most obvious that is overlooked.

SHOULD THEY BE CONTINUED?

Let us consider first those records that are maintained from day to day. When new records are instituted there generally is a definite necessity for them. Usually they serve one of two purposes. Either they are necessary to furnish executives with current facts or figures, or they are maintained for the purpose of providing summary figures at the end of some period of time. In some instances they answer both these purposes. There is always the danger that once such a record is started it will be continued indefinitely without periodic scrutiny of its value. Subordinates, sometimes unaware of the purpose for which a record was initiated, continue faithfully to maintain it, although the function it performed originally may no longer exist.

There is always the possibility of overlapping or duplication in certain records. It is not uncommon for two subdepartments to maintain duplicate sets of records for ready reference because neither department head wants to go to the other department to obtain information. Although there would be some inconvenience in the latter practice, it undoubtedly involves less time than maintaining a duplicate set of records. It is only human nature for any department head to build up his own unit as much as possible by maintaining a large staff and an elaborate system of records. For example, the accounting department might have readily available information used occasionally by the purchasing department, or vice versa, and yet both departments may maintain a complete set of records. Similar instances could

In recent years institutions have grown so rapidly and increased in complexity to such an extent that records accumulate much faster than they did in former years.

be cited with respect to academic records.

An outstanding example of needless duplication of records occurred in a large state university several years ago. For many, many years this institution filed each month a copy of every paid vendor's invoice (50,000 or 60,000 annually) containing the signatures of three officials, a complete copy of every pay roll, and a detailed listing of all its cash receipts with the state auditor. A chance inquiry disclosed that these documents never were examined by anyone in the state government, and as soon as received they were taken to the state garage and placed in a pile to collect dust; in fact, the state auditor himself was not even aware that these documents were being filed by the university. With his consent the practice was discontinued, and a brief monthly report was substituted.

The annual saving involved in this change is difficult to estimate. It was an appreciable sum, as much clerical work was eliminated, and there was a large saving in printing costs, as at that time the institution was providing its own special invoice-voucher forms for use of vendors. Other instances of this nature could be cited, but this outstanding example indicates why such procedures should be carefully scrutinized now and then.

RECORDS TO BE RETAINED

During the past several years, with greatly enlarged enrollments, space of all kinds has been at a premium, and in order to conserve it executives continually have wrestled with the problem of determining the length of time old records should be preserved. Further, the entire problem of records has become more acute because the institutions have grown so rapidly and increased in complexity to such an extent that records accumulate much faster. A few years of operation under modern conditions may produce as many records as were produced in many



years under the less complex methods of operation.

It is not feasible to retain everything, as it would require whole buildings devoted to storage, and an indeterminate number of files. However, it always must be understood clearly that an educational institution differs decidedly from a commercial enterprise. The latter can destroy its records after expiration of the statute of limitations with little likelihood of any embarrassment at some future time. However all educational institutions are public or quasi-public organizations, and their records have a more lasting value. Records that may seem of minor importance today may be of great importance a few years hence. The preservation of everything definitely would be "the line of least resistance." But this is out of the question, as it is too expensive. There comes a time when something has to be destroyed.

In recent years, much progress has been made in the development of several processes whereby records are

transferred to small films that can be stored in an almost insignificant amount of space. The cost of these reproduction methods is not exorbitant, but it is a factor that must not be overlooked whenever an administrator is faced with the decision to destroy or retain any record. After reproduction, the original record can be destroyed, as the films can be projected on a small screen for reference purposes. Of course, it is not as easy to refer to such film records as to the records themselves.

DIFFERENCE IN INSTITUTIONS

Unfortunately, there is no rule of thumb that can be used in determining which records an institution can safely destroy and which ought to be retained. However, it is well to bear in mind that educational institutions—especially those that are tax supported—always are subject to investigations of one sort or another. Such investigations may go back as far as 10, 15, or even 25 years, and if adequate



Progress has been made in the development of several processes whereby records are transferred to small films and the original record destroyed.

records are not available, the situation may become exceedingly embarrassing to the administration.

For example, the supervisor of a storeroom may be accused of mismanagement and careless use, or even theft, of materials under his jurisdiction. All materials that go out from this storeroom undoubtedly are issued to other university departments upon requisitions signed by properly designated department officers, so that all transactions are within the university itself. This being the case, there might be some doubt concerning the advisability of retaining these requisitions for reference indefinitely. However, if perpetual inventories and records of payments to vendors, of the receipt of merchandise, and of issues to units are retained, in case of a detailed audit or an investigation, the story of operations of the storeroom is quite complete.

It should always be remembered that it is just as important to protect the innocent accused of wrongdoing as it

is to prove the guilt of those responsible for misappropriation of funds or other property. There can be little doubt that a single unhappy experience resulting from overzealous destruction of records will cause any administrator to be somewhat wary about destroying similar records in the future. Moreover, availability of adequate records that furnish definite proof of losses by an institution through theft may result in the recovery of thousands of dollars if the loss happens to be covered by insurance or a surety bond. Without such records the proof of loss cannot easily be established.

Nearly all institutions are subject, at some time, to investigations of one type or another, and there is no greater protection than a complete set of records of each transaction. This is particularly significant if such an investigation is colored by political motives.

Unfortunately, no institution is immune to these investigations, although

all would like to be, but there is no greater safeguard than building up adequate records from day to day, plus retention of those most vital to the system. These two steps may save an honest official endless embarrassment. The memory of the average individual is quite reliable, but it is most surprising how details of transactions that took place only a few months or even weeks previous can be forgotten. Sometimes an additional line or two of explanation or a brief cross reference on a couple of documents may represent the difference between a complete picture of what actually happened and a hazy recollection of what might have occurred.

SIGNIFICANCE OF RECORDS

Academic and related records also have real value. During World War II every institution was visited frequently by representatives of the F.B.I. making inquiries concerning former students for various purposes. At present this procedure is being repeated in connection with the Korean crisis. Obviously, the more information the institution can furnish, the better, as bits of insignificant data sometimes provide a definite insight into the character of an individual under investigation.

Insofar as possible, academic and personnel information retained should go beyond the mere academic grades received by former students. The former close relationship between teacher and student largely has disappeared, and it is rarely possible to get a good evaluation of a former student from his professors. Of course, there are exceptions. Here again, the expense of filing the original documents or of photographing them before destruction requires serious study.

HISTORICAL SIGNIFICANCE

There is one final feature of the retention of old records that frequently is not considered. This relates to their historical significance. In a country as comparatively young as the United States this particular importance of records often is overlooked. More significance is attached to the historical value of all kinds of old records as a country matures. True enough, such records may be of interest only to historians and those compiling data for a speech or a book, but there can be little doubt that with the passage of time more attention will be paid to the preservation of such material.

UNIVERSITIES AND COLLEGES ARE now faced with many budget problems resulting from increased costs and decreased revenues. This forces physical plant administrators to reexamine the organization and procedures within the buildings and grounds department in order to help effect economies.

A reduced maintenance budget immediately suggests a curtailment of operations which, in effect, means a lowered standard of maintenance for the physical plant. It is not necessary to emphasize the folly of subscribing to any plan that increases the amount of deferred maintenance. The problems we faced in 1946 after five years of operating under circumstances that compelled us to accept the idea of deferred maintenance and reduced maintenance standards are well remembered. It cost a lot of money to put buildings back in condition and to learn that deferred maintenance spells false economy. The decision to reduce maintenance standards should be made only as a last resort, and before such a decision is made, we must be assured that all activities in the department are being performed at the highest level of efficiency possible.

What is the key to an efficient maintenance department? My answer to that question would be just two words: good organization. By good organization, I mean the right combination of personnel and equipment, adequate supervision, and finally a procedure that gives the physical plant administrator good control over the expenditure of maintenance funds. This last point, control of expenditures, is the one most of us are inclined to forget. We're generally more concerned about the first three points—personnel, equipment and supervision—and we don't realize that good control over expenditures is equally important.

Control of expenditures and good cost records put the person responsible for plant maintenance in the enviable position of being able to say to top management, "I can assure you we are doing the utmost with every dollar in the maintenance budget."

There are seven services for which the superintendent of buildings and grounds is ordinarily responsible: (1)

From a paper presented at the 39th annual meeting of the Association of Physical Plant Administrators of Universities and Colleges, Ann Arbor, Mich., May 1952.

Controlling the MAINTENANCE DOLLAR

ANTHONY D. LAZZARO

Assistant Business Manager and Superintendent
of Buildings and Grounds
University of Southern California

Under the new system no job becomes a good excuse for spending a lazy day in this or that building. Formerly a craftsman had free rein in charging his time by filling out time sheet saying where he had worked and how long.



maintenance and limited remodeling of the existing physical plant; (2) janitorial service; (3) operation and maintenance of the heating plant; (4) care and maintenance of grounds; (5) distribution of power and utility services; (6) police and watchman services, and (7) transportation services. In addition to these services, the superintendent of buildings and grounds may be directly or indirectly concerned with other services or expenditures, depending on the organization plan at his respective institution.

The fact that I am going to discuss in detail only the first of these seven responsibilities, namely, maintenance and limited remodeling of the existing physical plant, is by no means a reflection on the relative importance of the other six functions. A quick examination of the component parts that make up the total budget will soon impress one with the importance of these other responsibilities. Janitorial service costs, for example, always make up a sizable portion of the budget. So does the money set aside for the operation and maintenance of the heating plant. It has been my experience that we are likely to minimize the importance of some routine function, such as janitorial service, until something reminds us that the extra janitor now needed in Bridge Hall is costing us more than \$2000 a year! These six responsibilities are important from every standpoint, but for the most part I believe that in the budget set aside for maintenance and repairs we find the greatest room, and perhaps need, for effective control of expenditures.

CONTROL IS ESSENTIAL

We find in the first responsibility—that of maintenance of the physical plant—all of these challenges and more. We find that the highest paid craftsmen are in this group. Well equipped shops must be provided to give adequate service, the cost of materials used in building maintenance is great, and the problems encountered in meeting this responsibility require a good portion of our time. We find that control is essential not only to effect economies but also to ensure ourselves that we are in fact rendering the very best maintenance service possible within the limits of facilities and funds made available to us.

At the University of Southern California the control over the maintenance dollar was quite adequate until just

a few years ago. There were apparently proper supervision, fairly good shop facilities, and an acceptable cost accounting system consisting of an accrual of charges to the respective buildings as reported by the craftsmen on time cards made out at the end of each working day. To explain it briefly, the system operated on the following basis:

1. Comparative decentralization within the buildings and grounds department. Each craft was controlled by a foreman or a leadman who verbally delegated work as he became aware of it. The foreman was kept advised by the superintendent's office of needed work, usually by telephone, and certainly far too infrequently by written order.

2. The craftsman had free rein in charging his time to the various buildings at the end of the work day by filling out a time sheet on which he said in effect, "Today, I worked in Alumni Hall 2 hours, Bridge Hall 4 hours, and the Administration Building, 2 hours." Control over what he did, or whether he did anything at all, was vested entirely in the shop foreman. Only when the craftsman worked on a job for which special funds were allocated was a work order number issued. And even then, the time spent on work orders was similarly noted on a time sheet made out at the end of the work day.

Cost records were kept on a blanket order basis, with each building being assigned a blanket order number for one or several services, such as repairs, utilities or janitor service. Control over charges to these blanket orders was weak because the system called for the craftsmen to report labor and material charges instead of providing for a routine and controlled accounting of time and materials.

That briefly summarizes the general procedure that was used in our buildings and grounds department.

Like so many other universities throughout the country, we were faced with an enlarging campus, a vastly increased student enrollment, and the accompanying intensified usage of our facilities. The inevitable aftermath was, of course, the need for a larger operation and maintenance budget. There is nothing unique about our being in that predicament; that's a common disease for physical plant administrators! Well, in our case, the additional maintenance funds weren't to be had unless we proved the need. This resulted in

an examination of our practices and procedures, all of our thinking revolving about the question, "Are we getting our dollar's worth out of the maintenance department? How do we know?"

The question could not be answered intelligently. Cost figures were available, but there was no assurance that adequate controls were exercised by the persons responsible for reporting costs.

A study of the procedures resulted in some sweeping changes. Top management at the university recognized the problem and gave our department a free hand in the reorganization that followed. Accounting procedures were changed, a new work order system was installed, the stock issue and control system was changed, and improved shop facilities were provided. Briefly, the reorganization resulted in these changes:

1. Complete control of all operation and maintenance activity is centralized in the office of the superintendent of buildings and grounds.

2. Every request for maintenance, regardless of how minor, is passed on to craftsmen only in the form of a written work order. Every request for maintenance is written up as a work order, assigned the proper cost control number, classified as routine, rush or emergency, and then directed to the shop or shops concerned.

3. The full eight-hour day is accounted for in tenths of an hour by use of a time clock. Each man is assigned a job card on which there is space to write in work order numbers and space for automatic timing in and out on the different work orders throughout the day.

TWO IMPORTANT ADVANTAGES

Under this system there are two important advantages: First, the artisan is forced to be specific in accounting for his time. Work orders for each and every job leave no room for misappropriation of materials or miscalculation of time spent on each job. A work order calling for replacement of a broken window limits the average time and the materials to be charged to the job. All work orders are eventually returned to the superintendent's office and, by easy reference to supporting records, it can be determined: (a) when the work order was initiated and by whom; (b) when the work was started; (c) which artisan or artisans worked on

it; (d) how long it took to do the job, and (e) what materials were used to complete the job. Finally, the total cost of doing the job is available for posting to the proper account for the building where the repairs were made.

A second advantage is this—the superintendent gains control of work scheduling and planning to whatever degree necessary to effect priorities on important jobs. This doesn't mean that the foreman loses the initiative insofar as assigning his personnel is concerned. Routing of work orders is entirely the foreman's concern provided he meets important schedules on rush work orders and jobs requiring intershop coordination.

ADDITIONAL BENEFIT

In addition to these two outstanding advantages, another important benefit was realized. All shop personnel suddenly became time conscious! And when the men became time conscious, when they realized that time costs money, the institution, in effect, started to save money by getting more done in the same eight-hour day! The artisan soon learns that his time and use of materials on *this* job are going to be converted into dollars and cents for the superintendent to check to whatever degree he wishes. The superintendent personally approves final charges on all work orders. It takes him only about five minutes a day to look at completed work orders and, if any questions in regard to labor or material costs arise, a more complete audit of charges is made before the job is finally closed out. Every man knows that if he does the job well and efficiently, the records will show it. They also know that excessive time or material charges on a job will likely call for an explanation. In addition to this effective control, the system gives the craftsman a feeling of individuality—a feeling that his efforts will be recognized and appreciated.

What are the results of our experience under this system? The results should be reviewed in terms of requirements for any system designed to ensure good maintenance practices.

First, quality of workmanship is necessary. Under this system quality went up, primarily because each craftsman realizes that he and he alone is accountable for the job. Under our system it is no trouble at all to check on who did the job, and to pass on praise or criticism to the artisan. This is the sort of thing that makes a man

think it's all worth while, and to us that means good personnel relations as well as quality workmanship.

Second, the volume of work done under the new system surpassed even our fondest expectations. The realization that time was important resulted in a greatly accelerated pace for processing and completion of work. Under our system, no job becomes a good excuse for spending a lazy day in this or that building. Routine maintenance orders are promptly and efficiently processed, and time is available to do major remodeling projects that in the past were farmed out.

We stepped up our preventive maintenance program and took our reserve work orders out of moth balls. The result is better maintained physical plant at virtually no extra cost. The realization by craftsmen that every hour is to be automatically accounted for in tenths of an hour makes a tremendous difference in the volume of work processed.

Third, what did we gain in terms of general efficiency of operations? Again our greatest hopes fell short of the gratifying results. Now a job scheduled for Wednesday afternoon is done on Wednesday afternoon. Written work orders for every job, no matter how small, permit planning and scheduling by shop foremen never before possible. We no longer depend on shop foremen to do clerical functions required to process a report or complaint into a work order. This is done for him by a dispatching clerk in the office. Foremen no longer concern themselves with filling out and approving time slips during the last hour of each work day. This is automatically done by time clock during the day. In other words, a master plumber or a master electrician is just that. By taking routine clerical functions away from his responsibilities, we are able to use him more for the job for which he was hired and can do best. These clerical functions can take up as much as 40 per cent of a foreman's time.

A fourth and final requirement of any system designed for efficient management of the maintenance dollar calls for accurate cost records. The new procedures permit not only a general answer in terms of dollars and cents but, if desired, a detailed and critical account of every expenditure is available by easy reference to work orders on which we maintain numerical and chronological files, as well as files by building.

Such an analysis could specifically report on (1) each repair and remodeling job done in any building; (2) when it was done, and (3) how much each job cost for labor and materials.

This type of information gives an administrator the answer to many questions not even remotely answerable under the general system we had before. If management wants to know what happened to the maintenance dollar, we can be as specific as is necessary on every phase of operational or maintenance costs. The system provides for a cost accounting procedure that reports on the accrual of charges for vacations, sickness, excused absences, holidays and other nonproductive costs of this nature. Each man-hour is accounted for and consequently a report on any one of these overhead charges is unquestionably accurate. By means of such studies, the superintendent can review budgetary needs on the basis of the following classifications of expenditures: (1) overhead costs; (2) fixed cost expenditures, such as for utilities; (3) average routine maintenance costs, and (4) remodeling costs or nonrecurring costs. This type of analysis isn't ordinarily necessary, and the administrator may never need to take full advantage of its possibilities. The system provides for it as an additional service to be rendered in the event it is needed.

SYSTEM REDUCES COSTS

Our experience with this system of maintenance control proves that it will reduce operation and maintenance costs. During the three years it has been in use, our physical plant has expanded from 1,040,000 square feet to 1,365,000 square feet, an increase of 32 per cent. To meet anticipated increases in operation and maintenance costs, our budget was increased \$86,819, an increase of only 12 per cent. Whereas our operation and maintenance cost averaged \$0.70½ before adoption of this system, it is now averaging only \$0.60 per square foot, and this makes no adjustment for higher wages, increased material costs, higher utility and property tax rates, and increased insurance costs resulting from higher rates and increased assessed valuations.

This record proves to us that the key to increased efficiency lies in our realization that controls over the what, where, when and why of maintenance operations do indeed pay dividends.

LESSONS LEARNED IN OUT-OF-CLASS activities are just as important to college students as are those learned in class and laboratory sessions, so educators are fairly well agreed.

Lessons learned in student residence hall living are perhaps more lasting and, hence, more significant, than are those learned in other out-of-class activities. Values accruing from such living usually are thought of in terms of learning to live with others and in learning to cooperate in group functions.

But, there is another aspect which, if expanded, will do at least two things: help students develop a further feeling of awareness of responsibility toward the group, and make the administration of residence halls easier for the college or university officials under whose jurisdiction is placed the accountability for the operation of the halls. It is this latter aspect that holds our attention.

Students like to gripe. "The food is poor." "Helpings aren't large enough." "Why can't we have this or that for meals?" "Room rents are too high." "The maid and janitor service is not up to standard." "Noise made by some residents disturbs our studying." "Practical jokers keep our floor in an uproar." "We don't want to dress for dinner." These are but a few of the complaints one hears every year.

The attitude on the part of some in administration or management seems to be to disregard student opinion as often as possible and to say, "This is it. You'll conform, or else." Others tell the student residents something like this, "We are willing to listen to you and to do what we can to help in any situation. Write out your complaint so that we will know exactly what you have in mind. We'll be able to discuss it more fully if you do that." If the complaint seems to be something affecting a large group of students the answer may be, "Have your house government designate a certain few as a committee representing the hall. We'll know then that you are representing all the residents and not speaking for yourself only."

These answers are such that the student residents are made aware of two things: that management is willing to



Residence Hall Discipline

through student committees

CALVIN S. SIFFERD

Supervisor of Counseling
Men's Residence Halls, University of Illinois

listen, and that those purporting to speak for the residents have assumed a responsibility toward the occupants of the hall when they do speak. Many complainants never appear when invited to pin down their resentments on paper and many, when told to get an authorization from their house government, do not care to carry their complaints there, or the student of-

ficers do not give their sanction to the airing of the grievance, real or fancied, before management.

Another method, perhaps even more potent in keeping down the number of complaints and in building morale in the halls, is the use of student committees appointed by the house government or elected by the residents, such as a food committee, a service com-

mittee, a lounge committee, and so on. Such committees, when properly organized, serve as a buffer between management and residents and act as a channel through which two currents flow—one from residents to management and the other from management to residents. Probably more important to management is the feeling that is thus gradually developed in the student residents that they have a stake in the halls and a voice, however small, in its management.

If there is dissatisfaction with the food—the quantity served, the dishes served, or the style of preparing or cooking—the battle is more than half won before it starts, so far as management is concerned, if the student committee can sit down with the dietitian, have its comments heard, and hear her explanation of why it is impossible to comply. Or, it may be that there is no reason the students' requests cannot be granted, those in charge simply not being aware of residents' thoughts on the matter.

DEVELOP SENSE OF PRIDE

Breakage—deliberate or through horseplay, vandalism, disregard of the rights of others, and the resulting complaints—these and many more are a constant headache to management in many halls, most of which can be alleviated or done away with entirely by making the residents feel that the halls are their homes away from home and the sentiment developed that these are good places to live, not just hotels, places to sleep and eat. How to develop this feeling is the question. It has been observed that such a feeling often is proportionate to the length of time the hall has been in operation. It is difficult, if not impossible, to develop a feeling of loyalty and a feeling of belonging to a hall just opened. It takes a few years for the residents to develop the pride that management wishes to foster, but it can be done, and one of the ways is for management to encourage students to handle their own affairs.

On many campuses offenses that occur in the residence halls are handled by management; when occurring out of the halls, by the deans' offices or by institutional disciplinary committees. If the desire can be created within the residents to take care of their own problems, and if local experience shows that student disposition of problems is effected

judiciously, in many cases the deans or the campus disciplinary bodies will be happy to have the student residents handle their own disciplinary cases that affect the halls and not the campus in general.

Such house disciplinary committees cannot be set up from above. To make them conscientiously operative to the degree wished for by management, the desire to handle their own problems must come from the residents. Often, talking with some of the house leaders, casually telling them of experiences of other halls or other campuses and of the possibility of being able to handle their own problems here, will be all the impetus necessary.

When housing disciplinary committees are organized the membership may be composed from among those residents petitioning for a place on the committee, or else the executive council of the hall government may make up the disciplinary board. In general, the former method has more to recommend it. The house officers are busy enough without sitting as a disciplinary committee, and the more students interested in house affairs the better will be the hall.

After the disciplinary committee is organized, how does it get any business? Ideally, from the standpoint of management, it is always to be hoped that there never will be any cases for the committee to consider. And residents would like to have it that way, too. For example, however, when noise becomes excessive over a long enough period of time, residents are bound to complain. Or horseplay may develop into fire hazards or other dangers incompatible with the precepts of good living. With the proper functioning of a hall disciplinary committee, these matters will be taken up with that body rather than with management. After a complaint is submitted in writing the disciplinary body will meet, discuss the case, decide whether or not a hearing should be held, and, if the matter is deemed serious enough for consideration, hear the complainants and defendants, and decide on the disposition of the case.

What punishments can such a disciplinary committee impose, one may wonder. It can go just as far as management can go, and in some cases farther. Management will have a difficult time imposing a fine and making it stick. A student committee can do it with the sum collected going into the house treasury. Denial of the right

of participation in all house functions and virtual ostracism by fellow residents will ensure the fine's being paid. The disciplinary committee can impose a reprimand more galling to the student than one coming from management because it comes from his peers and fellow residents with whom he is in daily contact. The student committee, with the backing of management, can impose probationary periods, the breaking of such probation meaning immediate dismissal from the halls. Or, if the case is serious enough, the committee may ask management to dismiss a resident immediately.

Do these committees do the job? We believe they do. A survey of our records shows that there have been fewer infractions of rules of house and school and that there have been fewer headaches for management since the development of student disciplinary committees. It hasn't been easy at times to get a house as a whole to assume responsibility for the conduct of its own members. I remember one time when a hall wished to pass the student responsibility to management. The residents were told that it would be a simple matter for the police to include the interior of the halls in their tours of duty, and that the matter in question could certainly be handled in that way. The thought of police patrolling their hall was so repugnant that the students took the matter in hand without further ado, solving this problem so well that from that time on that hall never hesitated in taking hold of its own problems, however difficult.

SHOW REMARKABLE WISDOM

Occasionally, disciplinary committees have asked me to sit in the room while a case was being handled, and I have constantly been amazed at the wisdom and good judgment that have been exhibited by such a student group. I have seen them cut cocky and arrogant individuals down to size in short order and make them like it. I once heard a lecture given a recalcitrant student that would have been wonderful coming from a dean of 20 years' experience; coming from a 20 year old senior it was magnificent.

With proper guidance and interest, management need have no fear that student disciplinary committees in the residence halls will not do an adequate job. Give them a trial; they'll make management's job easier.



UNIVERSITY OF MIAMI PROJECTS

1. Merrick Building

MALCOLM ROSS

University Editor
University of Miami, Coral Gables, Fla.

PROPERLY TO APPRECIATE AND EVALUATE the Merrick Building, located on the main campus of the University of Miami in Coral Gables, Fla., it is essential to know something of its background and the background of the University of Miami.

The idea of founding the university was originated during the days of the Florida land boom, and construction was started on what was supposed to be the first permanent building. This building, of ornate Spanish-Moorish design, was to bear the name of the leader in founding the new university, George Merrick, founder and developer of the city of Coral Gables.

In order that the new university might open its doors on time, another building, located in the hotel and

apartment section of Coral Gables about a mile north of the main campus, was obtained. This was supposed to be a temporary arrangement and this temporary building, not completed at the time it was acquired, was fitted with beaverboard partitions to provide classrooms.

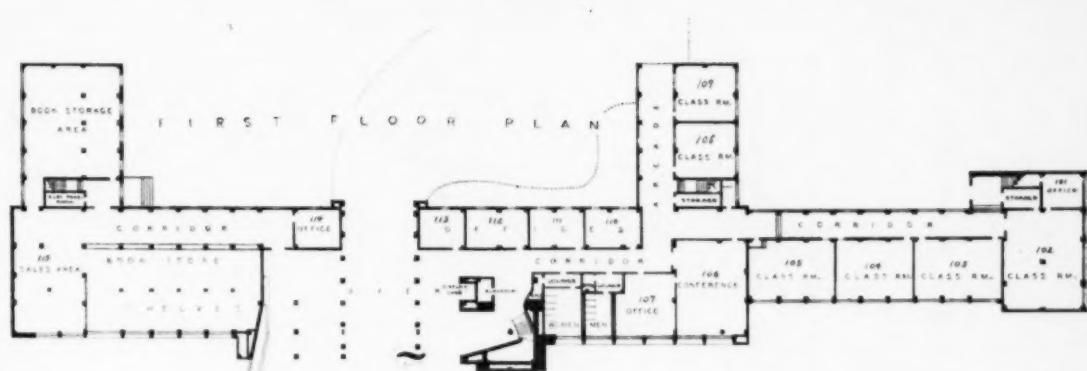
However, the land boom came to an end, thus depriving the new university of the great portion of the funds that were subscribed. Following closely on that happening, the south Florida area was visited by its worst hurricane. Despite these adverse happenings, the University of Miami opened its doors on Oct. 18, 1926.

Lacking the money to proceed further with the Merrick Building, all work on its construction ceased, leav-

ing a huge reinforced concrete framework standing bleakly amid Nature's tangle of tropical growth. It soon became known as the "Skeleton Building" and it remained alone and forlorn until 1949, when the present building, of modern contemporary design, was constructed after architectural plans drawn by Robert M. Little and Marion I. Manley. It was completed in 1950.

In the meantime, in 1947, the Memorial Classroom Building, accommodating 2100 students at a time, had been constructed on another section of the main campus, and a complete dormitory section comprising 27 apartment buildings, a student club, a sewage disposal plant, and a management building was nearing completion. Other temporary structures, including classroom units, had been built on the main campus.

Thus, the Merrick Building, utilizing the reinforced concrete framework intended to hold a structure of Spanish-Moorish design, was fitted in with the modern main campus of the uni-



versity, the building being completed 24 years after the laying of the cornerstone and first construction work was started. At last, the old skeleton was clothed.

The Merrick Building is 585 feet in length and is three stories tall, with a seven-story tower. It contains 26 class-rooms (capacity 1000), seven large

and five smaller lecture rooms (capacity 950), library, bookstore, eight seminar rooms, and an art gallery.

The exterior construction is concrete and concrete block, stucco and Tennessee stone. Interior partitions are plaster on gypsum block. Windows are of the aluminum awning type. Stairways are terrazzo on concrete. Exterior walls

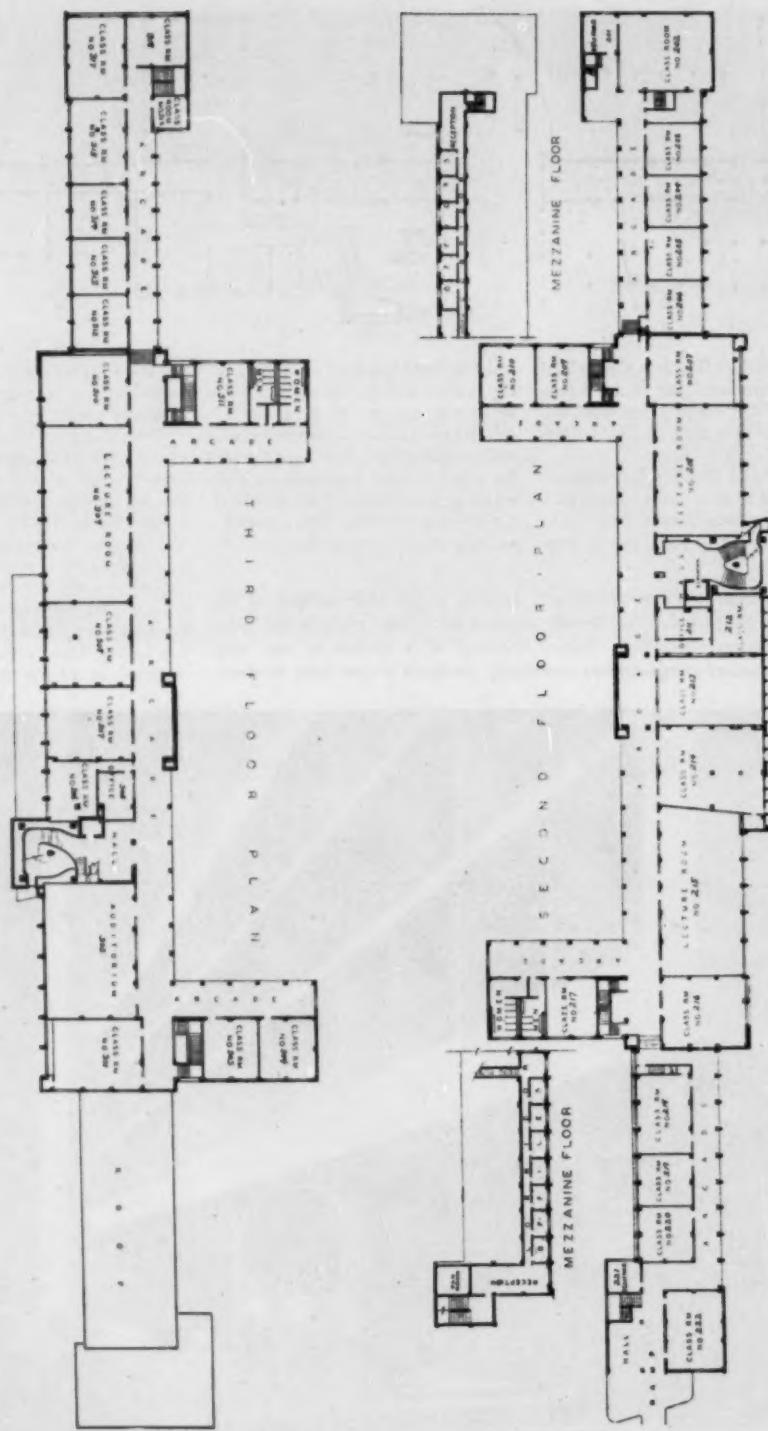
are stucco painted with a cement base paint. Interior ceilings are perforated acoustical blocks on plaster base.

The lighting is recessed copper fluorescent. The call system is by bells from central control, and the elevator is a self push-button type. Floors are asphalt tile on concrete and terrazzo. Wainscot in rooms and galleries is glazed block. Gallery rails and combination benches are aluminum and cypress. The ground floor patio is Tennessee stone. The cost of construction of the Merrick Building totaled \$900,000, or \$9 per square foot.

Opposite Page: View of the Merrick Building on the main campus of the University of Miami. The tower, seven stories tall, contains an electronically operated carillon. Below: Close-up of a section of one wing showing recessed compartments containing aluminum shutter-type windows.



SECOND AND THIRD FLOOR PLANS, MERRICK CLASSROOM BUILDING, UNIVERSITY OF MIAMI, MIAMI, FLA.





FRONT VIEW OF RING THEATER

2. The Ring Theater

THE RING THEATER, LOCATED ON the main campus of the University of Miami, opens new and exciting vistas in live theater.

Several ideas which may revolutionize theater design have been incorporated by architects Robert M. Little and Marion I. Manley. Because of its unusual flexibility of design it will permit any type of staging, including proscenium and horseshoe, as well as theater-in-the-round. Completely

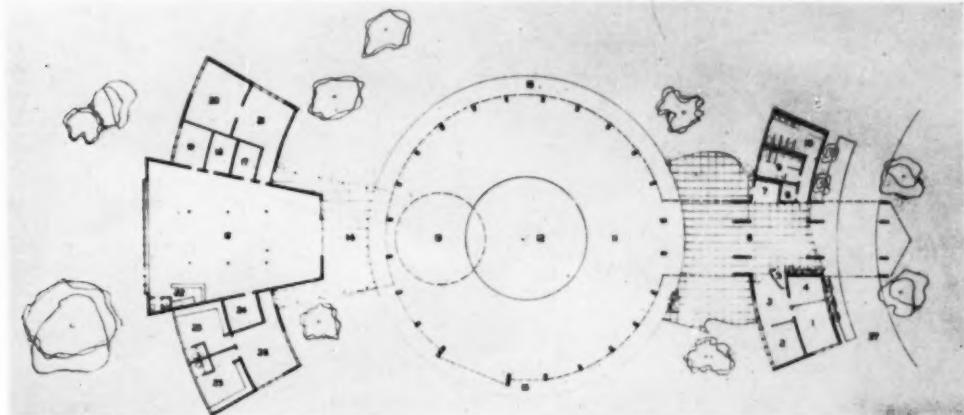
circular, the theater has a revolving stage and devices by which the seating arrangements can be changed to bring the audience and performers into closer, more flexible relationship.

Central unit of the structure is a circular auditorium 100 feet in diameter, completely free from interior posts, surmounted by a reinforced concrete dome. Starting with a seating capacity of 400, the theater eventually will seat up to 900. At present no seat

is more than five rows from the playing area.

Entrance to the auditorium is through a lobby and covered promenade from the front unit, the curved wings of which house three administrative offices, reception room, and box office on the left, with a soft drink booth and public restrooms on the right.

At the rear, facing the university lake, is a workshop area 50 by 60 feet with two curved wings. A covered loggia connects it with the central wing unit. In the east wing are dressing rooms and a green room for the actors, while in the west wing are a workroom and storage room for the



KEY TO RING THEATER

| | | | |
|---------------|---------------------|-------------------|-------------------|
| 1. Office | 7. Concession | 14. Loggia | 21. Sewing |
| 2. Office | 8. Janitor | 15. Promenade | 22. Paint |
| 3. Reception | 9. Men | 16. Workshop | 23. Dressing Room |
| 4. Office | 10. Women | 17. Electric Shop | 24. Equipment |
| 5. Box Office | 11. Ring | 18. Props | 25. Dressing |
| 6. Lobby | 12. Ring Stage | 19. Office | 26. Green Room |
| | 13. Revolving Stage | 20. Storage | 27. Drive |

costume department. The main workshop houses the paint shop, property and scenery shop, electrical shop, and storage rooms.

Extraordinary feature of the auditorium is a revolving stage 40 feet in diameter in the rear segment of the larger circle. A specially designed curved curtain track is hung above this revolving stage for proscenium and horseshoe type productions.

A circular catwalk, 14 feet above the floor, is suspended from the dome 17 feet inside the circumference. House lighting is installed in the floor of the catwalk and the stage lighting is contained in an egg-crate grid suspended from the center of the dome. All lights and sound are controlled from a booth atop the front entrance.

An intercommunication system permits the house manager, stage manager, and chief electrician to be in constant contact during the entire progress of each show.

The entire building is of concrete and steel construction. Owing to the year-round warm climate in the Miami area, no heating arrangements are required. On the contrary, there are no walls to the central structure, their place being taken by slim steel sup-

ports on the outside of the perimeter and walls being formed of aluminum jalousies that can be opened in warm

weather for better ventilation and closed during inclement weather. Cost of the building was \$140,000.

3. Lowe Art Gallery

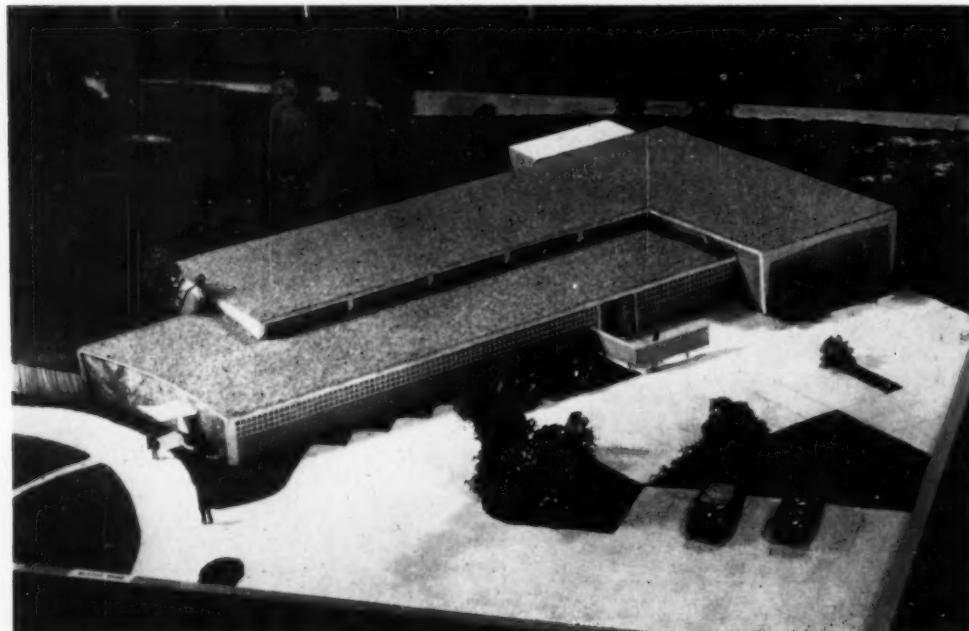
THE NEW LOWE ART GALLERY, completed in February 1952, provides the Miami area with a long needed art center. There is space for a continuous and varied showing of pictures from the finest museums in the country and from great private collections, as well as for Florida artists.

The gallery was made possible through the generosity of Joe and Emily Lowe of New York. Mr. Lowe, president of the Joe Lowe Corporation and of the Popsicle Company of America, made the gift to the University of Miami through the Joe and Emily Lowe Foundation.

Architect Robert M. Little of Miami designed the structure. Of concrete, steel and cement block construction, the new gallery is more than 175 feet

in length and 90 feet wide. It contains two main exhibition halls, a library to house books on art, a print room for exhibiting rare works in the graphic arts, and a large entrance hall and lounge, in addition to administrative offices and storage rooms. The art gallery, located on the main campus of the university directly across from the Merrick Building, is diagonally across from the Student Club.

The Lowe Gallery, with its sculpture garden and large pool, is the most modern structure of its type in the Southeast. It contains the latest equipment for maintaining temperature and humidity control, a special electrical device that records the gallery attendance figures, and lighting of the most modern type.



Architect's model of Lowe Art Gallery on main campus of University of Miami. The building is located di-

rectly across from the Merrick Building on a canal that will be broadened and landscaped along its banks.



APPLIED ARTS BUILDING, Cincinnati,

represents only first unit of much larger project

THE EXPANDING COLLEGE OF Applied Arts of the University of Cincinnati will occupy, as the first unit of a proposed larger project, the Frederick H. and Eleanor C. U. Alms Memorial Building dedicated last month. The site is part of the recent 19 acre expansion into Burnet Woods Park of the university campus, a pleasant wooded knoll overlooking the Wilson Auditorium and other campus buildings from across University Avenue.

The design is contemporary and the conception of the structural frame is part of the scheme and with the selection of the same tight red campus brick the general feeling is that of the immediate adjacent building. Extensive use was made of brick masonry plane masses with intersecting transparent glass walls and overhanging balconies and roof cantilevers.

The greater project, when complete, will be arranged to form a large landscaped courtyard. The Alms Building's north wall, which is wholly of glass, and its north wall balconies and terraces look out onto this courtyard, which will be for use of the College of Applied Arts for curricular and

WILLIAM SCHOELWER

Superintendent of Buildings and Grounds
University of Cincinnati

recreational purposes. Frequent inter-communication between buildings and outside will be provided.

The construction is fireproof with concrete skeleton and enclosing brick masonry walls, with concrete block backup and cut stone trim.

The funds were limited mostly to the \$200,000 bequest of Mrs. Eleanor C. U. Alms made long before the current period of high prices and, under the terms of the will, available for use only at this time. Thus it became necessary to make most economical use of limited funds and yet to plan a building practical in size, not too small to be useful. This was accomplished by designing for simple forming, straightaway construction, a minimum of partitions and the like.

Since the College of Applied Arts, located in the city of Cincinnati, is at a center of cooperating practicing members of professions covering the fine arts and applied arts, it was decided that the initial Alms unit must serve the dual function of everyday

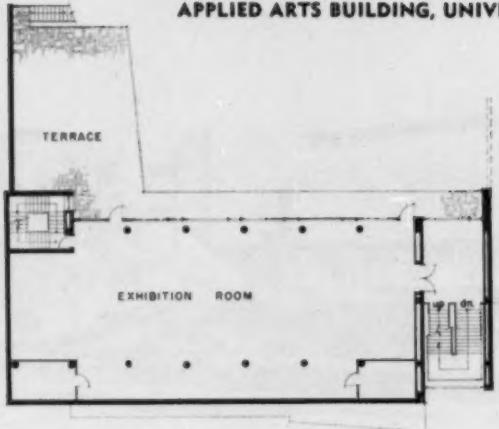
use by the student body and faculty and also of liaison with these practicing professionals.

Therefore, the program was set up to include a main entrance and a main entrance lobby at the ground story and a large staircase extending down to the basement and up to the second and third stories. The main stairway is supplemented by a service stairway located at the opposite end of the building. On the ground floor, and opening directly from the main lobby, is a lecture room with a seating capacity of 300 for curricular and extensive lectures and meetings.

On the second story, all space is devoted to housing displays of student work and related outside work and traveling exhibits. Provision for storage, preparation, hanging and displaying and special focused lighting are included. This exhibition space may be extended, in season, out to the north balcony and to the adjacent terrace separated from the inside only by the north glass wall and thence out into the landscaped courtyard.

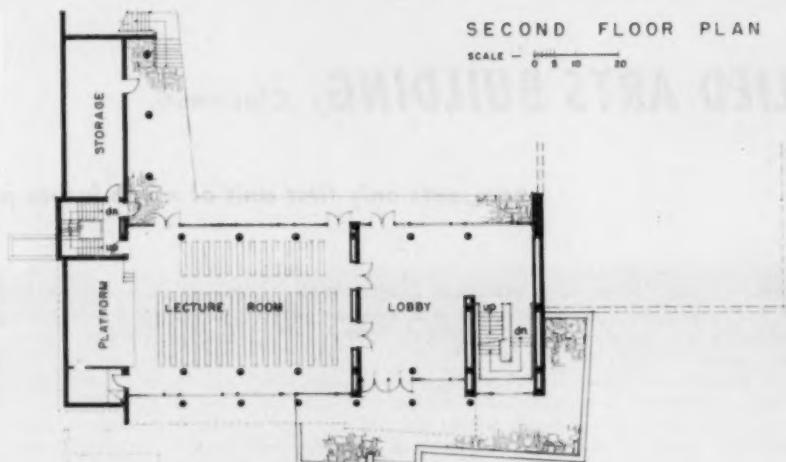
The third story eventually will be occupied by the college library, and such auxiliaries as workrooms, seminar

APPLIED ARTS BUILDING, UNIVERSITY OF CINCINNATI



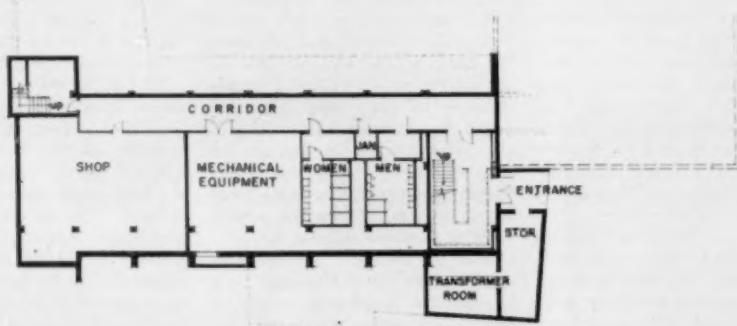
SECOND FLOOR PLAN

SCALE — 0 5 10 20



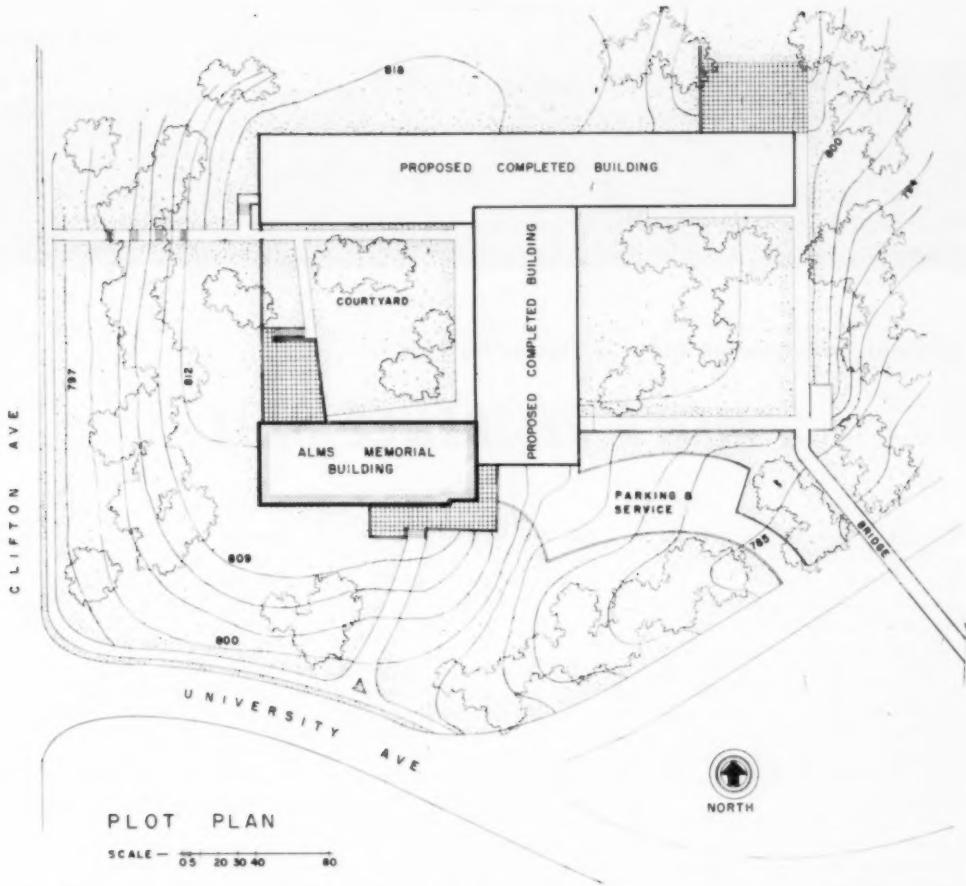
FIRST FLOOR PLAN

SCALE — 0 5 10 20



BASEMENT PLAN

SCALE — 0 5 10 20



rooms and the like will be incorporated in the connecting proposed extension. However, for the present, this space with its entire north wall of glass will be used as a free-hand drawing studio.

In the basement are the toilet rooms, mechanical equipment space, and storage and shop facilities.

The ceilings are acoustical tile units applied with mastic to the underside of the flush concrete ceiling slabs. Lighting is by use of incandescent lens box fixtures recessed in the concrete construction. Receptacles are provided in ceilings for special portable spotighting.

The floor surfacings are asphalt tile units, applied in mastic to concrete slabs.

The walls in the exhibition room are burlap, mounted on wood, for exhibi mounting. Otherwise walls mainly are faced with the outside face

brick brought in through the glass transparencies from the outside.

The color scheme for asphalt tile and for acoustical ceilings, free concrete columns, and other painted items was selected to harmonize with and add brightness to the outside face brick surfaces of room walls.

The heating is by a split system consisting of both a hot air and forced warm air system. The hot water system has continuous baseboard convectors, placed at bases of the glass walls, with a few auxiliary convectors for isolated rooms. Water is heated with steam in a converter unit.

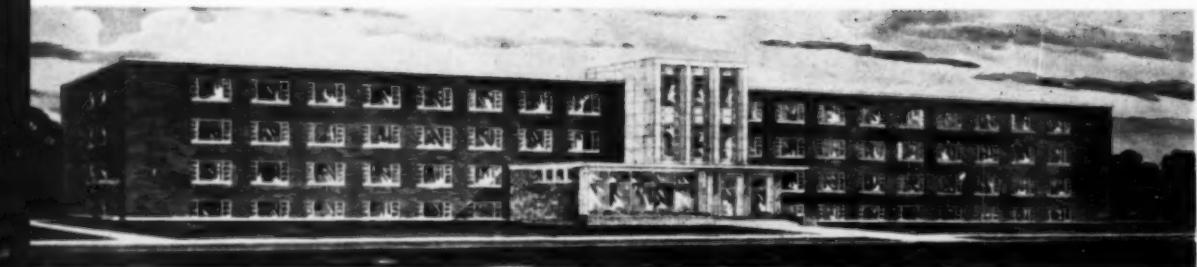
The forced warm air system has provision for introducing fresh air and venting and recirculating room air. A central heating unit with steam coils, filters, fan, motor, and proportioning dampers is the center from which a duct system radiates and serves, as does the hot water converter, with low

pressure steam reduced from high pressure of the steam brought underground from the campus boiler plant.

A system of temperature regulation will maintain room temperatures at the desired degree with zoned introduction of proper quantities of outside air for required cooling in the winter season. There is provision for placing required cooling coils into the central heating unit for future summer cooling.

The university's general program and clock system have been extended to serve the Alms memorial unit.

The unit cost of the new building, including outside underground utility connections, grading and pavements, but not including architect's fees, was: \$0.66 per cubic foot of volume; \$10.50 per square foot of floor. With outside work omitted, the unit cost was \$0.53 per cubic foot of volume, and \$8.40 per square foot of floor.



Federal government loan is financing this

MEN'S RESIDENCE HALL

THE NEW MEN'S RESIDENCE HALL BEING built on the campus of Montana State University at Missoula is the first unit of a larger housing development. Ultimately the plan of this development will be in the form of a huge "H" with a central court or mall on the axis of South Hall, another men's residence hall. When the building is completed it will house approximately 650 students, but the east wing now being constructed will provide quarters for approximately 250.

A \$750,000 project, the general construction will cost \$519,057, while the plumbing and heating will be \$87,352 and the electrical installations \$27,608. These contracts total \$634,017, leaving \$116,000 to furnish and equip the building.

Architects for the project are Fred A. Brinkman and Percy H. Lenon of Kalispell, Mont.

The four-story structure will house most of the students now living in Jumbo Hall, the temporary prefabricated dormitory moved from Vancouver shipyards in 1946 to the campus to take care of the heavy postwar veteran enrollment. Jumbo Hall eventually will be removed.

The new men's residence hall is being financed by a direct loan from the federal government under the housing act of 1950 for educational buildings. It will be repaid over a 40 year period out of net earnings and income from dormitory operations. No state funds will be used in financing the project.

The building is of reinforced concrete with the exterior of tapestry

DONNA HERRINGTON

Publications and News Service
Montana State University
Missoula

brick. The entrance lobby and lounge are of natural cut stone. The building will have 120 student rooms, two lounges and study rooms, a lobby, office, resident's apartment, two laundries and pressing rooms, and utility and storage rooms. Most of the rooms will be for two students each with a few for three students. There will also be a proctor's room on each floor.

An interesting detail of the structural design is the use of lightweight concrete blocks in the exterior bearing walls, which made it possible to eliminate all exterior columns. Earthquake resistance is accomplished by diagonal steel bracing in every alternate bay.

DESIGN IS SIMPLE

The main entrance motif is carried out in native stone with boxes for flowers surrounding the large view windows of the lounge and lobby. Above the entrance are two-story feature windows accented by aluminum grilles. The architectural design is simple and straightforward, emphasizing a horizontal treatment, and indicating the functional use of the building.

The basement will have a lounge and will have rooms for storage. The building will be heated from the university heating plant, and the hot water will be distributed by baseboard units.

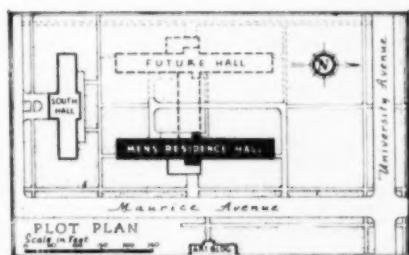
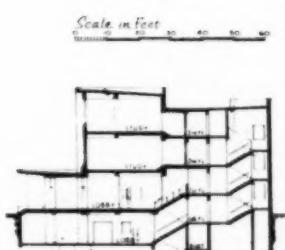
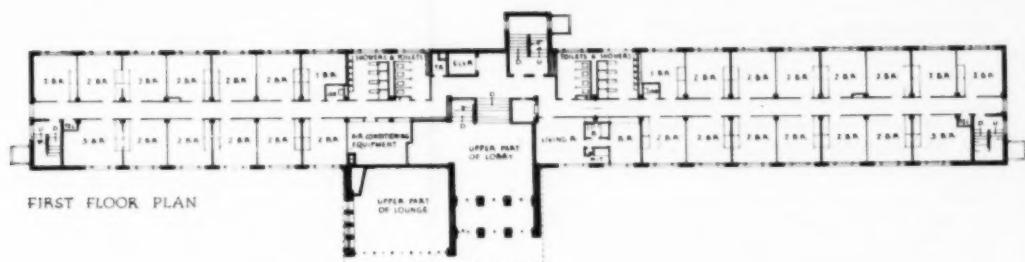
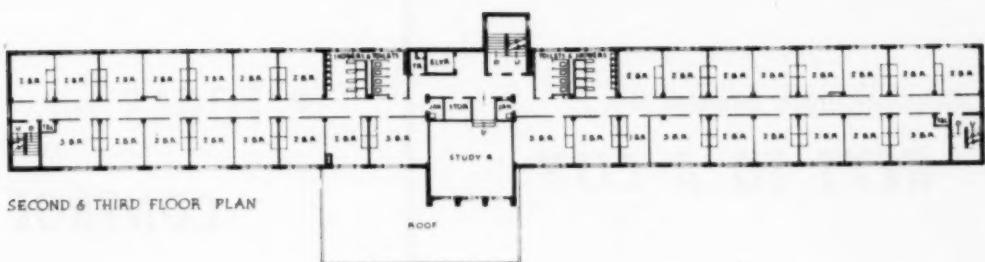
There will be no kitchen in the hall and students will eat their meals in the dining room at South Hall.

Probably the most interesting room in the building will be the modernistic lounge on the ground floor. The room will have a corner fireplace and may be closed off from the lobby by folding doors. The two-story-high ceiling will be paneled in silver, gold and maroon, the school colors.

The lobby will be entered through two sets of glass doors. The university seal, 4 feet in diameter, will be embossed in brass and terrazzo on the lobby floor. The lobby will also have the main office and individual mail boxes for the residents.

Students' rooms will be lighted by 200 watt lights and study lamps. Each room will have a wardrobe with mirror and chest of drawers. There will be one large window for each room, the center fixed sash of insulated double glass, with opening casements on each side.

The building has an over-all length of 307 feet and a width of 38 feet. It is a four-story fireproof structure with inside partitions of gypsum tile finished with smooth plaster painted in pastel colors. The floors are covered with asphalt tile except for the lobbies, toilets, showers, laundries and stairs, where terrazzo will be used, and the corridors and lounges, where rubber tile will be installed for sound-deadening. Acoustical tile and acoustical plastic on the ceilings of the traffic lanes will contribute to the noise reduction. Doors and built-in fixtures will be



MEN'S RESIDENCE HALL
MONTANA STATE UNIVERSITY - MISSOULA, MONTANA

of birch with some oak paneling in the main lounge. All windows will be double glazed with a sealed-in vacuum between the glass. The roof is four-ply asbestos built up over 1 inch rigid roof insulation.

The head resident's apartment will have a kitchen, bedroom, living room and bath. It is on the first floor in the center of the building.

Other additional conveniences will be two telephones on each floor, stairs

at the center and at each end of the floors, and a freight elevator.

Construction started in March and university officials expect the building to be completed in time for occupancy the fall quarter of 1953.

This locksmith handles the

KEYS TO A CITY

FOR MORE THAN 26 YEARS PEARL BOATMAN HAS HELD the keys to a city—a city regarded by many as the football capital of the world, but officially listed by the U.S. Post Office Department as "Notre Dame, Ind."

Mr. Boatman services the 10,000 locks and has made or duplicated many of the 25,000 keys that open the doors at Notre Dame. His clients are the more than 3000 students who live in the 14 campus residence halls, the faculty and staff that occupy 40 other buildings, and the 117 families of married veterans in the university's Vetsville community.

Also requiring the locksmith's attention occasionally are the tabernacle locks, many of foreign manufacture, in the score of chapels at Notre Dame, as well as several safes in the university's business offices. "No lock is foolproof," according to Mr. Boatman, for an experienced locksmith soon finds that one is as easy to open as another if one has the know-how. "In fact," Mr. Boatman says, "some of the locks in use at Notre Dame for more than 50 years are harder to pick than modern equipment."

Mr. Boatman identifies campus keys at a glance no matter where they turn up and a major share of his troubles comes as a result of lost keys. "Some student locks himself out of his room at least once a day," he says. Grinning, he recalled one student who crawled in and out of the transom of his locked room for several days. "Finally, I was called and I had the jammed lock fixed in just a few minutes," Mr. Boatman related.

Working at a small bench in the corner of the carpenter shop, the small, graying lock expert explained that he first worked for the university as a carpenter, learning the secrets of locks as a hobby. "When the construction of more and more buildings required a specialist, I taught myself to be a locksmith," Mr. Boatman continued, "and the job gets bigger every year. The new Nieuwland Science Center required the installation of 2000 locks, all of the latest design."

"Most of my work at Notre Dame is due to simple wear and tear on keys and locks turned thousands of times each year," Mr. Boatman stated. "For example, each of the university's 2000 post office mail boxes have nearly 300 possible combinations and, until recently, the door knobs and locks at the university's library had to be changed every six weeks because of the wear they got from student traffic," he added.

In Mr. Boatman's precision work, a thousandth of an inch can make the difference between a smooth working or a sluggish lock. His shop handles more work in a year than all of the locksmiths in a city of 100,000 people. "The job doesn't require very many tools," he says, "just a lot of experience in tackling precise, difficult mechanisms."

• TOOLS for CONTROL

ALTA B. ATKINSON

Manager of Food Service
Instructor in Home Economics
Teachers College, Columbia University
New York City

IN A FOOD SERVICE OPERATION THERE are many areas in which it is necessary to develop tools for control. These controls need not be elaborate or complicated to administer. An analysis of the operation to determine what the manager should know in order to function effectively is the beginning. Then simple forms are set up to obtain the information required.

The set of forms accompanying this series of articles has been developed to serve as such controls. In this institution three meals a day are served. In addition, there is afternoon tea service from 3 to 5 p.m. The number of meals served throughout the day approximates 2500 during the fall and spring semesters, and 4000 during summer session. In addition, there are from 500 to 600 transactions a day at a small soda fountain and snack bar.

FOOD CONTROL FORMS

The basis of everything, of course, is the menu. A selective menu is offered with a cafeteria type of service. The menu is designed according to the following pattern:

Breakfast

Selection of fruit and tomato juice,

3 or 4

Fruit: canned, stewed, fresh in season, 3 or 4

Hot and dry cereals

Eggs: poached, fried or scrambled (alternate)

Bacon or sausage

Griddle cakes (occasionally)

Coffee cake, muffins, hard rolls, toast

Luncheon and Dinner

Fruit and fruit and vegetable juices

Soup, 1 or 2

Meat, 1

Meat extender, 1 or 2

Meat substitute, 1 or 2

Vegetables: potato and three others (one green)

Steamed rice

Rolls: soft and hard

Salads: choice of 6

Fruit salad bowl added at dinner

Desserts:

Pie or cake

Pudding

Baked custard

Gelatin dessert

Ice cream and sundaes

Fruit: fresh and canned

Luncheon Only

Choice of 5 sandwiches

One hearty cold plate

Dinner Only

One "special dinner" which offers:

First course or salad

Meat and two vegetables

Rolls and butter

Dessert and coffee

This is sold at a price well below what it would cost à la carte and from a fourth to a third of the students select this meal.

The food cost at this time must not exceed 47 per cent. The price of milk, salads and vegetables is held at a minimum. The low cost entrees and the desserts subsidize the meat items to some extent.

WORKSHEET

The "worksheet" shown in the illustration is the production order. The menu is broken down and entered on a worksheet for the several production units: kitchen, bakeshop and salad units. The kitchen or production supervisor fills in the worksheets in duplicate, using a carbon. The amount of each item to be produced is determined by the supervisor. One copy of each production sheet is posted in the unit where items are to be prepared, and the duplicate is sent to the cafeteria or service supervisor at the time of service. If changes are made in the menu they must be made on both copies of the worksheet. The service supervisor uses her copy to call orders to the kitchen during the meal; records each order, and crosses it off when the order is received. The original is used in the kitchen as a "check-out" sheet. Orders are recorded as they are received from the counter and checked off as they are sent.

The duplicate bakeshop "production sheet" is returned to the kitchen at the end of the day with the amount left over recorded, or the time the item ran out indicated.

(Continued Next Month)

PRODUCTION ORDER

| Unit Bakeshop | Day Tuesday | Date Feb. 26, 1952 |
|---------------|---|------------------------|
| Weather | No. Served | No. Specials |
| ORDER | MENU | DELIVERIES OUT RETURNS |
| | BREAKFAST: Prune Coffee Cake Cinnamon Muffin | |
| | LUNCHEON: Gingerbread, Chocolate Frosting Pineapple, Cocoanut Pudding, Whipped Cream Baked Custard Gelatin With Custard Sauce Strawberry Sundae Sauce Blueberry Muffin Raisin Roll | |
| | DINNER: Pumpkin Pie Orange Pudding, Meringue Baked Apple Chocolate Fudge Sundae Sauce Poppy Seed Roll | |
| | (other items same as luncheon) | |

| Unit Salad | Day Tuesday | Date Feb. 26, 1952 |
|------------|--|------------------------|
| Weather | No. Served | No. Specials |
| ORDER | MENU | DELIVERIES OUT RETURNS |
| | SALAD PLATE: Chef's Salad Plate | |
| | SANDWICHES: Roast Beef on Twist Roll Egg Salad With Horseradish Liverwurst on Rye Pitch a Butter Cream Cheese and Marmalade | |
| | SALADS: Plain Cottage Cheese Assorted Relishes Creamy Cole Slaw Garden Salad Bowl, Tomato French Dressing Hard Cooked Egg Cottage Cheese, Scallions and Radishes Sour Cream Cranberry Gelatin | |
| | Fruit Salad — night only | |

| Unit Kitchen | Day Tuesday | Date Feb. 26, 1952 |
|--------------|---|------------------------|
| Weather | No. Served | No. Specials |
| ORDER | MENU | DELIVERIES OUT RETURNS |
| | BREAKFAST: Uncooked Cereal Scrambled Eggs Bacon | |
| | LUNCHEON: Cream of Tomato Soup Broiled Liver With Onion Sauce Shredded Tomato Sauce on Rice Chili Con Carne Whipped Potatoes Cream Style Corn Julienne Carrots, Chives Chopped Spinach Steamed Rice | |
| | D—deep pan — 3 qt. | |

Common misconceptions of the faculty

Concerning THE COLLEGE STORE

WHAT DOES A COLLEGE PROFESSOR see when he looks at a college store? To be able to answer this question, I constructed a questionnaire, gathered interviews, and tabulated the opinions of a random sample of 20 per cent of the University of Delaware's faculty and administrative staff. This was in addition to my own impressions contained in an 11 page report to my university.

By and large, faculty members know little about the stores serving their campuses—at least there is little evidence that they have done careful thinking. When asked a direct question, they are likely to be more realistic than are students, to be sure. For instance, on the question, "Are there exorbitant profits?" only 6 per cent answered affirmatively. Certainly the allegation I have heard on occasion from bookmen that there is collusion between store managers and professors is not true. On the other hand, I found that the small nucleus of vitally interested faculty members tended to accept, as evidenced by their recommendations over the years, assumptions about the store that confirmed some of the typical student charges brought against college stores when "shell-out" time rolls around twice each year.

In other words, the vitally interested faculty members, like students, tend to favor making changes without any serious investigation of the actual situation. Professors are often specialists and so have room in their minds only for rather simplified and stereotyped descriptions and solutions to problems outside of their specialized areas.

In any case, this much can be said: Store managers have had little support from faculties in clarifying or assisting them in giving students a better understanding of the problems store managers face. In fact, when faculty members are not totally indifferent, which usually is the case, they are supporting biased recommendations

LINCOLN ARMSTRONG

University of Delaware, Newark, Del.

stemming from poorly grounded assumptions.

I made the following categorical list of assumptions that seemed to find particular favor among faculty members not indifferent to the store and its operation. You will note in it the ring of the average every-year student complaint.

1. That student complaints in regard to textbook costs are justified.
2. That our store has been earning a real profit.
3. That a student government operated or a "co-op" store would automatically perform more efficiently, with less opposition, and with a greater volume of business, bringing greater savings to the student.
4. That there is something artificial in the business administrator's point of view that to offer greater competition with Main Street would result in increased criticism of the university.
5. That services of a "cultural activity" (browsing) nature would flow more readily from a student controlled store.
6. That a "rebate" or "dividend" plan (a) is vitally necessary to allay criticism; (b) is clearly possible; (c) is desirable.
7. That the students really want a co-op store.

SEVERAL TYPES OF STORES

A report I made to my university describes several types of college stores from the thorough going general store type to the simple "supplies dispensary" type, which is what exists in our university. The difficulties involved in defining what a co-op is were set out and a rather lengthy pro-and-con discussion of rebates. The conclusions drawn on these matters may be of interest.

1. A co-op seems to be just about any type of store one wishes to call a

co-op. Using the definition that pictures it as one where profits are returned according to membership shares and purchaser receipts, thus avoiding profit taxes, there are few in the United States; less than 4 per cent, to be precise. On the other hand, if we mean by "cooperative" a store whose profits go into funds for increasing services to students, then almost every college store is a cooperative directly or indirectly.

2. Between the terms "college bookstore" and "college store" there appears to be a significant difference. No group of students in their right minds would want or be able to take over a "bookstore." Strictly speaking, by necessity a bookstore must be subsidized. Thus any further discussion of the matter must imply that we are concerned with a true store that carries lines whose markups make possible defraying of expenses at least. A 20 per cent markup is apparently the base minimum at which any store can remain solvent.
3. To give rebates or not, in cash or in trade, is really not the issue at all. The important and underlying questions are: (a) what to do with profits? and (b) who is to decide? But there must be profits before they can be dispensed in whatever way. This applies whether the store is a cooperative or not, and no matter what definition of co-op is used.

Few stores give cash rebates, although many stores that formerly did so have abandoned the procedure when either (1) the university complained because all students were not participating, or (2) student disgust arose over the small size of the rebate, or (3) student disgust led to apathy and failure to bother participating which, it will be noted, completes a circle. Most schools and students have found that pooled profits are much more satisfactory than are individually distributed ones.

- Who is to decide where profits are to go? Logically, the greater the con-

trol by students (such as when the store is part of a college union), the more they will have to say in this matter. However, it must be remembered that if the store is not a private enterprise, separate from the university, such decisions are inevitably the joint concern of administration, faculty and student group, and this is as it should be.

The next step in the report involved answering the several assumptions mentioned earlier.

As to the justification for student complaints about prices, a negative reply was possible. I explained and compared usual operating margins with those in college stores and tried to point out the fallacies involved in thinking that anyone gets rich being a middleman on textbooks.

Assumption No. 2 was the crucial issue on our campus. Each year the financial statement of the university shows a figure between \$14,000 and \$18,000 as "Net Profit, Bookstore—Transferred to General Operating Fund." This has proved disturbing to the uninitiated in the tricky area of state supported institutional accounting. The explanation seems to be as follows: Much university income is from funds appropriated for designated purposes. Beyond these expected expenses any institution of this size continually faces additional and non-appropriation covered expenses and therefore needs an unencumbered fund of money, known as General Operating Fund. By meeting the operating costs of any income producing enterprise under its subsidy through the use of existing appropriated funds, the university is able to divert greater proportions of that income into the free floating General Operating Funds. Institutional accounting is always complex and tricky.

AVERAGE STUDENT SPENDS \$60

Therefore, what superficially appears to be more than an 8 per cent profit margin is in actuality much closer to 1 per cent. An average college store can realize a 5.48 per cent operating margin, but this reflects highly active trade book, merchandise and school supplies divisions. Our situation could not make this claim. Actually, in 1950-51, with 2000 students as our basis, the average student spent approximately \$60 in the bookstore; 80 per cent, or \$48, went for texts; 18 per cent, or \$11, for supplies, and 94 cents, or less than 2 per cent, was

spent in the trade book section. No store manager in the country expects any real profits from textbooks, and none would enter business if he had only academic supplies to depend upon for marginal profits. The fact is that real profit margins accrue only in trade books, personal supplies and merchandise, and other student services that a college store is able to handle.

In the light of all these findings, based upon a careful comparative analysis of financial statements for Delaware, Indiana and an average college store, it became clear that our store had not been making a real profit but had been operating under hidden subsidization.

For assumptions No. 3 and 5, there was no evidence available that would show that student owned *vs.* private or university owned stores operate more efficiently, with greater profits or with less opposition. There are



good and bad stores of all kinds apparently. The only significant differential discovered had to do with whether the group involved desired a true store or merely a book exchange, clearinghouse or supplies dispensary.

It follows then that a "cultural activity" and "browsing" atmosphere, which interested faculty may be expected to cry out for, and which is translatable into good business practices directed toward achieving good will, is the concern of any good store.

Several arguments against cooperative student control of the store were propounded, such as:

1. There are few pure membership co-ops alive today, although many have failed because of lack of continuing student interest.

2. No store can operate successfully in such a highly competitive business today on a less than completely professional basis.

3. Student complaints are overemphasized. They are known to complain under every conceivable organizational setup that exists today, and it is my contention that, if interested at all, the faculty tends to follow the students.

4. Membership voting is often a disruptive influence to management.

5. Students are really more interested in rebates than in membership or managerial control. But when they find that what they save on even a 10 per cent rebate amounts to only 0.5 per cent of their total college costs, they lose interest. For instance, on a rebate system at Delaware last year the best that even an engineering student could hope for in rebates would have been less than \$1.

On proposition No. 4 it was found that there was nothing artificial in the fear expressed by the business administrator of a state supported institution to the effect that there may be repercussions from too great an offer of competition with Main Street. Yet no situation was uncovered in which a student owned store had been forced to disassociate itself from the school and set up on Main Street independently. It is such a step as this that is implied in some of the arguments against having the students operate the bookstore. Such arguments do not appear to be tenable, nor are they backed by any statute, law or contract.

However, considerable evidence exists that many bookstores should assume a much more aggressive position than they have in the past. Certainly we need not bend over backward in avoiding offending private firms. It is always justifiable to serve student needs in detail. If Main Street fails to do so, it is the university's duty to do so.

VALUE OF REBATES

Proposition No. 6 raised the question of the value of giving rebates. By way of summary, it may be concluded that rebates will not necessarily dispose of student criticism. Obviously, other circumstances account for such criticism since students buy all sorts of things daily from stores not offering rebates and they do not complain. Also, rebates are dependent upon real profits, which many stores don't have. Even if real profits are realized there would be as many people against as there are advocates for handing out rebates to individual purchasers. Those "for" stress the implications involved for the store's good will. Those "against" stress two points: giving rebates does not give students a realistic impression of the business world, and the profits perform the least real benefit to the individual, the school or

the community when used in this way. Proposition No. 7 queried whether students really want a cooperative store or want to take over a college store in some other way. The answer was that they would have to be asked, and before that could be done, they would have to be told some of the facts so as to have a real basis for judgment. Few students, and not many more faculty members, possess such a basis today. The report concluded with several alternative plans for organization of a college store, each described in terms of its advantages and disadvantages.

My next move was the construction of a questionnaire with which to sample the opinion of the campus community at large. My sample consisted of 90 per cent male and 10 per cent female, 18 per cent administration, and the remaining 82 per cent faculty. When asked for the per cent of their personal use of the bookstore for official academic business, some 68 per cent said "regularly," 28 per cent "occasionally," and 4 per cent "seldom or never." When asked about personal supplies and services, only 10 per cent replied "regularly," 54 per cent "occasionally," and 37 per cent "seldom or never."

Next I asked a general question of attitude toward the college store. Only 16 per cent stated that they seldom ever think of the advantages or disadvantages of the college store. I believe that there should have been more, but they felt that they were being put to test. They knew they should think about the college store. Fifty-two per cent were a little too ambitious in saying that they were fairly interested in the college store, 32 per cent said they were vitally interested in the college store.

The next question described several possible alternative relationships between the store and the school. A sizable group all got on one bandwagon: 66 per cent agreed with the statement: "A 'general service' college store is necessary and duplication of services rendered elsewhere is justified if such action would constitute a considerable convenience to the campus personnel." This statement indicates that the faculty would like to have a more aggressive store at Delaware. The faculty would like to see a good professional manager without his hands being tied.

It is interesting to note that only 2 per cent thought that all of the

business of the store could just as well be handled by private off-campus enterprises. No one thought that the textbooks should be handled by off-campus enterprises or that the professors and departments should deal directly with the publishers and manufacturers in these matters.

Fourteen per cent went perhaps a bit farther than the 66 per cent in thinking that a college store should be operated as any other free competitive enterprise of similar nature. Its risks should be the same and its service limited only by the dictates of good business policy. I consider that statement just a bit beyond the



first statement. However, 16 per cent think that the college store should be limited to nonprofit distribution of textbooks and those academic supplies that are required for curricular and instructional purposes.

Another group of questions dealt with the actual organization of the store itself. Only 10 per cent of the faculty felt that the store should be a true cooperative. However, this group felt strongly about the matter.

The dominant group, 54 per cent, felt that while the administration should own and operate a college store, use of the proceeds over and above operating costs should be determined by an advisory committee representative of faculty, administration and the Student Government Association. Only 12 per cent thought that the Student Government Association should own, operate and control the college store, making it another enterprise like the "student lounge" subsidiary to a general student union.

Nearly half of the people checking the questionnaire indicated that professional management was necessary regardless of the control. They meant that the student government would merely act in an advisory capacity and would hire a professional manager.

The rest of the questionnaire was devoted to getting opinions on the following statements:

"Students should participate in all aspects of running a college store."

Strongly agree, 22 per cent; agree, 48 per cent; do not agree, 22 per cent; no opinion, 8 per cent.

"A college store should make an ideal laboratory for business administration and economics students." Strongly agree, 22 per cent; agree, 34 per cent; do not agree, 22 per cent; no opinion, 22 per cent.

"A truly useful college store would be one that might be listed among other cultural activities of the campus community. Thus it might be expected to promote book discussions, art displays, musicals, and be generally permeated with a 'browsing' atmosphere." Strongly agree, 32 per cent; agree, 28 per cent; do not agree, 34 per cent; no opinion, 6 per cent.

"It would be a good idea for the university to collect a book and supplies fee (similar to a breakage fee) along with other tuition fees, thus relieving the student of the problems and responsibilities involved in being his own purchasing agent." Only 4 per cent agreed with this; 90 per cent strongly disagreed.

"Student complaints about college stores reflect their immaturity and inability to face the reality of present costs of living. It would be a disservice to spoon-feed them by presenting them buying and price conditions that do not reflect the reality of the off-campus world." Strongly agree, 16 per cent; agree, 26 per cent; do not agree, 40 per cent; no opinion, 18 per cent.

EMOTIONALLY UPSET STUDENTS

I note that what we hear from students is usually from small, emotionally upset groups of students, but when we ask the students as a body, we usually get a pretty intelligent answer. The trouble is that we fail to ask the students as a body.

The questionnaire indicated that no one was making an unreasonable profit off the customers of our store. Only 6 per cent indicated any doubt about it.

Most professors indicated that they should be price conscious and careful to keep expenditures required of a student at a minimum, but most of them qualified this statement by stating "quality before price." If a good, new book comes out every term, it is the professor's duty to change it. Unfortunately this is a headache that bookstore managers are going to have to handle pretty much by themselves. I do think that a certain amount of cooperation could effect better relationships on that question.

THE PROFESSOR and his CONTRACT OF EMPLOYMENT

ON SEPT. 12, 1949, PROFESSOR B. B. Bennett, head of the department of languages of the Michigan College of Mining and Technology, wrote to Dr. Edward V. Sitter as follows:

"This letter will confirm our telephone conversation of September 10. The position you have accepted is an assistant professorship of German with a salary of \$4000 for the three-term year of approximately nine months.... I believe it was our understanding that the appointment is for a one-year period but will become permanent if both you and the administration of the college are quite satisfied at the close of the first year."

Dr. Sitter performed his duties as assistant professor of German from Sept. 19, 1949, to Nov. 10, 1949. On that date he was informed that his services were no longer required. He immediately filed suit for recovery of his salary for the remainder of the academic year, relying on his letter of September 12 as constituting a valid contract of employment. The board of control of the college pointed out in its pleading that, by the terms of the statute which established the institution and its governing board, authority to enter into contracts of employment of the faculty was vested in the board of control.

Dr. Sitter, in reply, offered to prove that, on other occasions, heads of departments of the college had been permitted to negotiate and consummate contracts of employment and thus, by well established custom, the board of control had delegated its contractual powers to departmental chairmen.

The supreme court of Michigan,¹ in affirming the trial court's judgment against Dr. Sitter, quoted with approval the following:²

"Public officers have and can exercise only such powers as are conferred

T. E. BLACKWELL

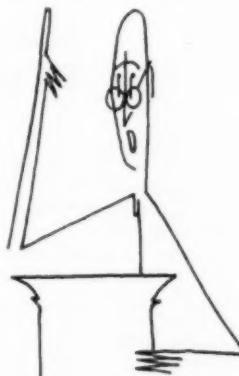
Vice Chancellor and Treasurer
Washington University, St. Louis

on them by law and a state is not bound by contracts made in its behalf by its officers or agents without previous authority conferred by statute or the constitution.

The powers of state officers being fixed by law, all persons dealing with such officers are charged with knowledge of the extent of their authority or power to bind the state, and are bound, at their peril, to ascertain whether the contemplated power was conferred."

The court stated its own conclusions as follows:

"Because of an absolute³ lack of power vested in Professor Bennett to



consummate a contract which would be binding upon defendants, nothing appearing in this record would or could constitute ratification of an alleged contract as asserted by appellant."

This strict statutory limitation on the power of public officers to delegate their authority is, of course, in contrast to the general rule of the common law⁴ on this subject of delegated powers:

"If there is a fixed and established

¹Sitter v. Board of Control, etc., 53 N.W. 2d 681 (1952).

²69 C.J. pp. 172, 173. See also 65 A.L.R. 811.

custom to employ such agents, the principal is presumed to consent to such employment, in the absence of express directions otherwise."

Thus, in the case of privately endowed college, if it could be shown that the governing board and the president had permitted, over a period of years, chairmen of departments to negotiate and execute contracts of employment on behalf of the institution, such established custom would be deemed to constitute an equitable estoppel, i.e. the institution would not be permitted to deny that power to contract had, in fact, been delegated, despite institutional regulations to the contrary.

However, a prospective employee must use due care in relying upon the assumption of authority by institutional officers. According to the evidence presented at the trial,⁵ in 1939, Hopper, the controller of Phillips Academy, in order to persuade George D. Braden, business manager of St. Mark's School, to resign his position and accept the position of assistant controller at Phillips Academy, offered him a position for life. The offer was made in the course of conversation and there was never a written confirmation of the terms and conditions of his contract of employment. In 1941, Hopper discharged him and Braden brought suit against the trustees for breach of his alleged life contract. The trustees offered no evidence to refute the oral offer of permanent tenure and, thus, the sole question before the court was whether a reasonably prudent man would be justified in assuming that a controller of a preparatory school had actual authority to make such an offer. The court ruled that, in view of the usual limitations upon the area of responsibility of a controller, the burden of proof was upon the plaintiff, and that he had

³Braden v. Trustees of Phillips Academy, 71 N.E. 2d 765 (1947).

failed to sustain his claim by sufficient evidence.

It is a matter of general knowledge in academic circles that, as a rule, permanent tenure can only be conferred by formal action of the governing board of the institution. Hence the courts have uniformly held that a faculty member is not justified in relying upon the assumed power, even of the president, to confer tenure rights.

Louis R. Trilling, a teacher in Townsend Harris High School, the preparatory school of the City College of New York, acquired full tenure rights in the high school in 1931. The high school was abolished by statute in 1942, terminating his position. He was employed on a temporary basis as an instructor in the City College and later received a letter from the president of City College, assuring him that, for the purpose of voting in his department of English, he would be regarded as having tenure from the date of his transfer from the high school to the college.

In March of 1945, Trilling, still employed on a temporary basis, wrote to the board of higher education of the city of New York, outlining his teaching career, and stating that, since September of 1944, he had been denied status as a member of the permanent teaching staff of the day session of City College, and asking that he be restored to his "rightful status." He was instructed by the board of higher education to make his request through the president of City College. He did so but received no reply. In April of 1946, he instituted legal proceedings to obtain a declaratory judgment to the effect that "he is a regular member of the English department of the day session faculty of the college of liberal arts and sciences of City College, with full tenure rights as of May 20, 1931."

NO POWER TO CONFER TENURE

The court, in its opinion,⁵ admits that the degree to which City College and Townsend Harris High School had been administered as a unit was not clear from the record before it. However, it ruled that the president of the college had no power to confer tenure; and that his action could not estop the board of higher education from denying that Trilling had acquired tenure thereby.

⁵Trilling v. Board of Higher Education of the City of New York, 67 N.Y.S. 2d. 572 (1946).



WHAT A COLLEGE EDUCATION COSTS in New York State

LOUIS H. CONGER Jr.

Associate in Education Research
State University of New York

WHAT DOES IT COST A FAMILY TO maintain a student in college? To what extent do students finance themselves by scholarships, loans, work and other sources of income? How much does a student's expense go up if he lives at the college instead of commuting to it?

In order to answer questions like these, we approached college students in a study sponsored jointly by the Association of Colleges and Universities of New York, the State Education Department, and the State University of New York. This article summarizes the original report prepared by Conger and Cowen.⁶ Students in 16 private colleges, five state teachers colleges, and seven two-year state institutes filled out questionnaires specifying their expenses and income for the

school year 1950-51. Only full-time nonveteran undergraduates were included.

Expenses vary greatly among different students, of course, but the use of medians and quartiles reduces the effect of extreme cases. The median amounts are taken to represent a "typical" expense budget, and the lower quartile amounts, an "economy" budget.

The amounts for tuition and fees, meals and room, and other expenses are given in Table 1. The table distinguishes between commuting and resident students and shows that in the private colleges resident students spend about \$600 more than commuting students, mainly because of the extra cost of board and room. In the state institutions the difference is less, but still sizable.

On the other hand, commuters spend somewhat more than resident students

⁶Conger, Louis, and Cowen, Philip A.: Expenses and Income of College Students. State University of New York, December 1951, pp. 11 (mimeo.).

on "other expenses." This difference originates in larger expenditures for clothing and recreation and may be a sign that commuters have more spare money than resident students have, or possibly it merely reflects different social standards imposed on the commuter through his greater contact with a noncollegiate world. "Other expenses" also includes books and supplies, laundry and dry cleaning, travel between home and college, and personal incidentals, as well as clothing and recreation.

The pattern of income of students is much more variable than is the pattern of their expenses. Not all students receive scholarships, for example, and not all of them work during the school year. For this reason, the income from various sources, as given in Table 2, represents the situation for groups of students rather than typical individual budgets.

The predominant rôle of the family contribution in the over-all picture is evident from Table 2. Naturally, the amount that a family can contribute depends to a large degree on the family income, and Table 3 gives further details on this point. The last columns of the table show that families with incomes of more than \$4000 typically contribute about 6 per cent of it to a student commuting to college, but if the student is a resident at the college, the family contributes about 15 per cent of its income. In families with incomes under \$4000, the percentages are larger. These percentages give an idea of the additional cash burden assumed by a family in maintaining a student away from home.

This family contribution does not necessarily represent the *extra* cost of college, since a youth not in college may likewise expect his parents to pay for clothing, dry cleaning, and recreation.

To what extent do these findings apply to other states? One important fact to keep in mind is that New York State fosters the liberal arts type of education by an extensive system of state scholarships, in addition to two state university colleges in which fees are \$400, rather than by offering liberal arts at low cost.

These brief comments hit the high spots only. Administrators concerned about the impact of college fees may well find food for thought in further study of the tables, as will college bound high school students and their parents.

Table 1—Typical and Economy Budget of Student Expense
New York State, 1950-51

| | Commuting to College | | | Resident at College | | |
|---|----------------------|-------------------------|------------------|---------------------|-------------------------|------------------|
| | Private Colleges | State Teachers Colleges | State Institutes | Private Colleges | State Teachers Colleges | State Institutes |
| TYPICAL BUDGET (Sum of medians) | | | | | | |
| Tuition and fees | \$ 520 | \$ 80 | \$ 20 | \$ 630 | \$ 80 | \$ 50 |
| Meals, or meals and room* | 140 | 100 | 120 | 700 | 570 | 570 |
| Other expenses | 590 | 420 | 580 | 480 | 400 | 410 |
| Total | 1250 | 600 | 720 | 1810 | 1050 | 1030 |
| ECONOMY BUDGET (Sum of lower quartiles) | | | | | | |
| Tuition and fees | \$ 450 | \$ 70 | \$ 20 | \$ 530 | \$ 70 | \$ 30 |
| Meals, or meals and room* | 80 | 60 | 80 | 590 | 470 | 450 |
| Other expenses | 320 | 340 | 350 | 300 | 260 | 260 |
| Total | 850 | 470 | 450 | 1420 | 800 | 740 |
| Number of Cases | 700 | 146 | 403 | 1090 | 380 | 272 |

*Meals and room for resident students; meals only for commuting students. Figures based on students not working for meals or room.

Table 2—Percentage of Income Obtained by Students From Various Sources, New York State, 1950-51

| Sources of Income | Commuting | | | Resident | | |
|--------------------------------------|------------------|-------------------------|------------------|------------------|-------------------------|------------------|
| | Private Colleges | State Teachers Colleges | State Institutes | Private Colleges | State Teachers Colleges | State Institutes |
| Family contribution | % | % | % | % | % | % |
| Family contribution | 54 | 38 | 41 | 68 | 61 | 47 |
| Scholarship | 6 | 4 | — | 7 | 1 | 2 |
| Work previous summer | 15 | 23 | 14 | 12 | 15 | 18 |
| Work during school year ¹ | 11 | 24 | 27 | 4 | 7 | 10 |
| Gifts | 2 | 2 | 3 | 1 | 2 | 2 |
| Savings ² | 6 | 6 | 9 | 3 | 6 | 11 |
| Loans and debt ³ | 5 | 2 | 5 | 4 | 8 | 8 |
| Other sources of income | 1 | 1 | 1 | 1 | 1 | 2 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |

¹Less than 0.5 per cent.

²Including the value of room and meals earned.

³Savings previously accumulated.

³Loans already received and debt to be acquired to finance school year 1950-51.

Table 3—Median Family Contribution to Student, and Ratio of Contribution to Family Income
New York State, 1950-51

| Family Income | Number of Cases | | Median ¹ Family Contribution | | Ratio of Contribution to Family Income ² | |
|---------------|-----------------|----------|---|----------|---|----------|
| | Commuting | Resident | Commuting | Resident | Commuting | Resident |
| Under \$2500 | 46 | 89 | — | \$400 | — | — |
| \$2500-\$4000 | 342 | 379 | \$300 | 640 | 9 | 20 |
| \$4000-\$6000 | 420 | 462 | 300 | 780 | 6 | 16 |
| \$6000-\$7500 | 137 | 226 | 350 | 1000 | 5 | 15 |
| \$7500-\$9000 | 99 | 147 | 530 | 1140 | 6 | 14 |
| Over \$9000 | 134 | 326 | 800 | 1440 | — | — |

¹Median based upon cases reporting some contribution.

²Midpoint of range of family income used in computing ratios.

³Fewer than 50 cases.

THERE ARE SOME REAL DIFFERENCES in the motivation of most employees in an enterprise organized for profit and those in a nonprofit organization. Some of these differences exist because of the fundamental nature of the two types of organizations.

The ordinary business organization has as its principal reason for continued existence the making of a profit. This profit, if any, is distributed among the owners or to the owner, if the business is a sole proprietorship. With the profit motive so important, most business policies are adopted because they will increase production, decrease costs, and, it is hoped, increase total profits.

The business organization usually has a definite product that can be measured and to which unit costs may be assigned. Each unit of the product can be given a definite price. Taxes affect this unit price and management policies as well. For example, the cost of some labor benefits may be low because high corporate income taxes make expense deductions less costly to the organization. Finally, these characteristics, peculiar to most business organizations, tend to equalize prices for the same product. In the long run these prices must at least cover the costs of production or the firm will go out of business. It is also true that in the long run the business must show a profit or it cannot attract the additional capital that is needed for growth.

The nonprofit enterprise, on the other hand, not being organized for profit, does not pay dividends and is for the most part tax free (at least from income taxes and some excises; if publicly supported, it is free from virtually all direct and some indirect taxes). Indeed, a nonprofit organization's continued additions to surplus indicate that the institution's original purposes are not being carried out.

Unlike the business organization, the nonprofit institution does not have profit making as the basis of its policy formation. The end product of these organizations can seldom, if ever, be measured except in a vague and sometimes useless way. Unlike businesses, the nonprofit institution cannot reduce its unit cost by increasing its output without running the risk of doing its main job less well. Since the product cannot be measured, it is not possible to place a definite price on each unit of output (each college graduate).

For increased efficiency,

OFFER EMPLOYEES SOME INCENTIVES

LOUIS JEFFERSON LONG

President, Wells College
Aurora, N. Y.

Taxes have not yet become significant in determining operating policies, though perhaps the lack of taxes has some significance. While business must show a profit in the long run, the nonprofit enterprise can operate at a loss indefinitely and depend on fund drives and gifts from interested persons to make up the difference year after year. Finally, the tendency for prices of the same product to be the same is not true of the nonprofit enterprise except in small groups of similar institutions that consider their programs and market as similar, and even here the price is seldom the same.

There are many examples of nonprofit enterprises, including privately endowed and tax supported colleges and universities, churches, educational foundations, governments and some governmental subdivisions. This discussion will be limited to colleges and universities and their particular problems.

The very basis of profit making enterprises, the profit motive, has given rise to certain incentives that promote increased efficiency, better products, and often a larger profit. Devices used by business to increase efficiency are:

1. Bonuses or profit sharing based on the total annual profits after taxes. The use of this incentive gives the employee the feeling that a proportionate share of the profit that his industry produces will be returned to him at the end of the year. This is an excellent incentive, but its use is largely restricted to the business organization and is seldom, if ever, employed by institutions of higher education.

2. Over-time pay to increase productivity may be used where more products are added than it costs to add to the original total.

3. Piece-rate pay with a minimum but no maximum wage. This incentive

places the responsibility for increased earnings on the individual worker. It cannot be used to any extent in colleges and only slightly in the larger universities.

4. Some companies have added automatic machinery to increase productivity and have been able to increase wages as a result. It is obvious that this incentive would have small effect on a teaching staff.

5. Wages geared to the cost of living constitute a good way to return a share of the product to the employee but are possible only where this increased cost can be added to the price. Some cost-of-living increases have been given to college and university employees but there has been a tendency for these increases to lag far behind the rise in the cost of living.

6. Group benefits, such as pensions, group insurance, medical aid, low-rent housing, and educational opportunities, have been used to advantage by both types of institutions.

7. The last incentive I shall mention will be the possibility of growth as the business grows. Selecting foremen and supervisors from the rank and file of employees has given a real and personal incentive to the individual to do his best work. But the hierarchy of professional rank in the colleges and universities makes this difficult, if not impractical, for use in such institutions.

To limit our problem further we should divide the educational institution's employees into two groups, namely, professional and nonprofessional. To avoid any misunderstanding, these two groups can be considered as the teaching staff and the non-teaching staff.

The nonprofessional group can be given many of the same incentives we have found employed in business.

Some incentives that can be used are the following:

1. Over-time pay where it is used wisely to keep the physical plant running and where it is necessary in order to compete with business for skilled and semi-skilled employees.

2. Labor saving equipment that enables the employee to do a better job with less fatigue than was possible without it. This can reduce the number of employees, providing higher wages for those remaining.

3. The same group benefits available to industrial employees. Such benefits are reasonable and necessary to ensure a continued supply of employees. Many institutions have not provided these benefits because they felt the cost would be too high, yet these are legitimate costs for nonprofit as well as profit making institutions and fees should be charged or appropriations requested that will make such benefits possible.

4. Wages related to the cost of living. This is more of a problem. There is a lag, serious at times, between increased income and the rise in the cost of living. Insofar as possible, however, the wages of this group should be related to cost-of-living requirements.

5. Adequate vacations with pay.

6. In the larger institutions, selecting proper department heads and basing promotions on performance. The important thing is to sell the institution to this group. They must be made to realize the significance of the work that is being done and the important part this group has in the operation of the enterprise. It is especially important that the professional group be made to understand that the non-professional group is as important to the success of the institution as is their own group.

7. Some chance of growing in the organization, if not in rank, at least in the wage scale. For this reason it is a good policy to have minimum and maximum wages for each job.

The chief problem is finding incentives for the professional employees. Most of them have spent many years in preparation for a life work. Often this has been done at great sacrifice of time and money. Frequently they find their best possible earnings being equaled or bettered by people with self-learned skills whose relatively short apprenticeship is in no way comparable to the training and experience of the teaching staff.

Those of us who are seeking incentives for the professional group should start with salaries. This is the most significant of all incentives available. First of all, the salary scale should be high enough to permit the institution to have a choice in hiring its employees. Second, the salary scale should be such that even the lowest salary will provide a comfortable standard of living in the community in which the institution is located. Third, salary increases should be granted for two reasons: adjustment to rising costs of living, and performance in teaching, writing or research. Granted that it is difficult to measure performance in the classroom, it is nevertheless not too difficult to know, after a period of time, which teachers are successful and which are not.

Since most colleges and universities have various ranks and fixed salaries for each rank, it has become difficult to keep able people who cannot be promoted in rank. A partial solution to this is to have a minimum but no maximum salary scale for each rank. This makes financial reward possible even when a promotion in rank is not.

REDUCE SIZE OF STAFF

Many college administrators will admit that they would like to pay higher salaries but their budgets won't permit it. This incentive to increased efficiency and better performance is so vital that it is worth drastic steps in order to provide for it. A suggestion to many institutions would be to cut the course offerings somewhat and reduce the size of the staff. This would give fewer persons to share the same teaching budget. In most cases this can be done without the educational program being hurt or the students being deprived of an opportunity to get a sound, basic education. The other solution is to increase fees and requests for appropriations for educational purposes. If the situation is serious enough, both solutions should be tried.

While adequate salary is the best incentive for the professional group, there are others of great importance, even though they are at times less tangible. Some of these other incentives are:

Plans for adequate security at retirement age should be provided. Great strides have been made in this respect, particularly in the last decade and a half. Our problem now is to find a way to make retirement income

increase with the increased cost of living.

Tenure and academic freedom are extremely important incentives. However, tenure and freedom rules must be very carefully drawn to prevent their defeating the basic purpose of this incentive. Improperly drawn rules can lead to stagnation in the professional group where such rules provide tenure until retirement with automatic promotions. Such rules should provide security of position but should also provide promotion and salary increments for merit only.

An intangible incentive comes in the creation of good morale. Most of us realize the importance of morale and do our best to achieve it, for this is the least expensive incentive we can have. Some of the policies we could adopt that would create better morale are:

1. Keep the faculty informed of the institution's program, both financial and educational.

2. See to it that there is public and professional notice for work of exceptional merit; perhaps financial reward in the form of a research grant.

3. An announced program of sabbatical leaves that are actually given, not just something held out for the future.

4. A voice in management (administration) is also a good morale builder because then there can be nothing withheld from members of the faculty that has any effect on their status.

5. Pleasant and effective conditions of work are very important. This does not mean that we should buy equipment that will not be used just for the sake of having it available.

6. Most significant of all is the need for understanding and sympathetic leadership. This will encourage effective group action and cooperation. This leadership must be careful and just in the interpretation of policies and in the introduction of radical changes that affect the whole group, and it must not establish unreasonable standards of performance.

We can see that our educational institutions are not like businesses. We do not want them to be, for their objectives are totally different. This does not mean that we cannot be businesslike in our approach to our many problems. In providing incentives we must be realistic and imaginative, for most of our problems are unique and require a unique solution.

NEWS

Education and Industry Cooperate at Cornell . . . Ruling on Recreational Construction . . . Decline in Enrollments Checked . . . First Quarter Steel Reduced . . . Construction Regulations Will Be Relaxed on May 1

Cornell University Announces Seven Business Associates

ITHACA, N.Y.—Cornell University Associates, a medium for "closer partnership" between Cornell and business and industry, announced here on October 3, is believed to be the most ambitious effort at education-industry cooperation so far attempted.

Firms elected to membership in Cornell University Associates will become eligible to benefit from the resources of Cornell's 19 academic divisions and seven interdepartmental research centers.

Details of the plan and the names of seven companies admitted to charter membership were reported at the opening session of the second annual meeting of the Cornell University Council, an organization of prominent alumni concerned with the long-range development of the institution.

The charter associates were announced as Avco Manufacturing Corp., B. F. Goodrich Co., Chesapeake & Ohio Railroad, Johns-Manville Corp., Philco Corp., Raymond Concrete Pile Co., and Tuller Construction Co.

Edwin T. Gibson of New York, chairman of a committee for the associates program, told the council of plans for enrolling other corporations, announced a schedule of annual membership fees, and released a booklet outlining research facilities and other resources of the divisions in Ithaca, the Cornell Medical College and School of Nursing in New York City, and the Cornell Aeronautical Laboratory.

Willard L. Emerson, vice president for university development, is executive director of the associates staff.

In addition to hearing of the education-industry plan, the 134 members of the Cornell University Council, who came from 18 states to attend the meeting, heard that gifts and grants

to Cornell during 1951-52 totaled \$6,375,203, an increase of almost 25 per cent over the previous year. The group discussed a program to stimulate bequests to Cornell and inspected three newly completed additions to the campus—Kimball and Thurston halls, an engineering materials center; Anabel Taylor Hall, an interfaith center and World War II memorial given by Myron C. Taylor, and the Albert R. Mann Library of the colleges of agriculture and home economics.

Accepting Requests for Recreational Construction

WASHINGTON, D.C.—Requests for exceptions and permits to commence construction of stadiums, field houses, skating rinks, floodlighting of athletic fields, and other types of recreational, entertainment and amusement projects which are required as a part of an integrated educational program may now be made directly to the Office of Education. This regulation became effective October 3.

Self-authorization of recreational, entertainment and amusement construction by schools will be permitted after May 1, 1953, up to and including the following quantities per project per quarter: 5 tons of carbon steel (not to include more than 2 tons of all types of structural shapes), 500 pounds of copper and copper-base alloys, and 300 pounds of aluminum.

No stainless steel or alloy steel is authorized. The DO rating authority under self-authorization allows \$15,000 worth of building equipment and building materials (other than controlled materials) and \$5000 worth of production equipment and production machinery. (These amounts are total for each project and may not include the use of DO ratings for purchase of furniture, stoves, refrigerators or machine tools.)

Large Freshman Classes Halt Fall in Total Enrollment

CINCINNATI.—The large number of freshmen enrolled in the nation's colleges this year has checked the decline in total enrollment of full-time students, which has been the trend for the past few years.

President Raymond Walters of the University of Cincinnati, tabulating reports from 507 institutions, found that only four colleges out of 10 have fewer students this year, whereas a year ago eight out of 10 reported declining enrollments.

All over the country a swelling tide of freshman enrollments is reported: Harvard has a 10 per cent increase in freshman students; University of California, a 6 per cent increase; University of Tennessee, a 36 per cent rise; University of Pittsburgh, an 18 per cent increase; University of Michigan, 29 per cent; University of Texas, 12 per cent.

Freshmen are showing a decided preference for engineering and business courses; too, there are some increases among students preparing to enter the teaching profession.

Korean war veterans represent only a tiny fraction of the freshman class in the institutions surveyed. The fall of 1953 is expected to yield big enrollment gains from the educational benefits voted Korean former servicemen by Congress last July.

Engineering Enrollments Rise to Meet Shortage

CAMBRIDGE, MASS.—The tide is beginning to turn in regard to the critical shortage of engineers and scientists not only in the United States but throughout most of the world, Dr. James R. Killian Jr., president of Massachusetts Institute of Technology, said in his

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annual report to the institute's corporation made public in mid-October.

"In the autumn of 1950," Dr. Killian reported, "the national freshman enrollment in engineering schools dropped 18 per cent, while the cumulative decline in enrollment was pointing to an output in 1954 substantially less than the output of the engineering schools before World War II."

Because industry, government and education joined in a program to acquaint the public with the national

shortage and its hazards, there was a 9 per cent nationwide increase in freshman engineering enrollment last fall.

National figures are not available for this fall, but a check of six engineering colleges just completed by the Massachusetts Institute of Technology shows that the average increase over last year in freshman registration at these institutions is 23 per cent.

M.I.T.'s own freshman class of 943, chosen from more than 3000 applicants, is the largest in its history.

Compared with the last normal year before World War II the institute's total student body has increased by 57 per cent, the undergraduate enrollment by 33 per cent, and the graduate enrollment by 139 per cent.

A school of industrial management with a graduate enrollment of 48 was opened at M.I.T. this fall. The undergraduate division of the school, made up of students in the course in business and engineering administration, has an enrollment of 200. The school is still in the organizational stage.



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Relax Construction Regulations May 1

WASHINGTON, D.C.—Relaxation of construction regulations effective May 1, 1953, will increase amounts of controlled materials that may be self-authorized by schools and most types of commercial construction.

The new Direction 8 to revised CMP Regulation 6, the basic construction order, issued by N.P.A. on October 3, was released to enable builders to do preliminary planning for future construction and place advance orders with suppliers, although deliveries of the new quantities of controlled materials may not be made until after May 1 of next year.

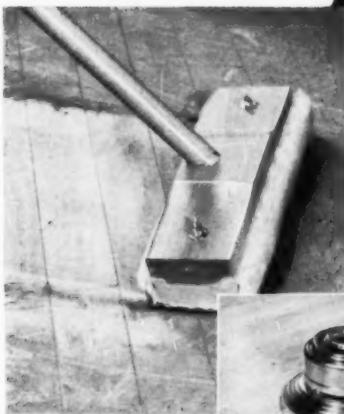
The regulation provides that the following quantities per project per quarter may be self-authorized: 25 tons of carbon steel including all types of structural shapes (not to include more than 2½ tons of alloy steel and no stainless steel); 5000 pounds of copper and copper-base alloys, and 4000 pounds of aluminum.

The DO rating authority under self-authorization permits \$100,000 worth of building equipment and building materials (other than controlled materials) and \$200,000 worth of production equipment and production machinery. (These amounts are total for each project and cover all items except machine tools.)

Such a controlled material order, or DO rated order, must contain a certification in the following form: "Certified under Revised CMP Regulation No. 6." U-8 is the rating symbol to be used.

No permit or authorization from the Office of Education will be necessary under the self-authorization program. If self-authorization is once elected,

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NEWS

then an applicant is not permitted to receive an additional allocation of controlled materials as a result of filing a 4-C application for the same project.

First Quarter Steel Allotment Off 12½%

WASHINGTON, D.C.—Construction projects deferred from the fourth quarter of 1952 can go ahead following D.P.A.'s allotment of controlled materials for school construction in

the first quarter of 1953. Some first quarter 1953 projects can also go forward.

On October 14, D.P.A. allocated 109,200 tons of steel, 5,800,000 pounds of copper, and 230,000 pounds of aluminum for colleges, elementary and secondary schools, libraries and museums. In carbon and structural steel the first quarter 1953 allotment represents a reduction of 12½ per cent from the fourth quarter 1952 allotments. This reflects the loss in-

duced by the eight weeks' strike last June and July.

The Office of Education urges schools to confer immediately with their architects or contractors to determine if any portion of the materials allotted for the fourth quarter of 1952 cannot be used. The return of such unused allotments will permit their reissuance to other projects.

"Only by cooperation of college and school officials in making such returns early in the quarter can effective use of materials be made," Dr. Earl J. McGrath, U.S. commissioner of education, declared.

Freshmen in Teachers Colleges Rate High

BROCKPORT, N.Y.—A new study of students now enrolled at teachers colleges of the State University of New York indicates that, as a group, they are equal in scholastic aptitude to students in the nation's four-year colleges.

In a recent study by Dr. Raye H. Conrad Jr. of the Teachers College in Brockport, N.Y., it was found that freshmen in teachers colleges attained an average score surpassing 54 per cent of the average of freshmen in the nation's four-year colleges, according to the widely used American Council Psychological Examination. The study included approximately 9000 students.

Dr. Conrad also found that the freshmen in teachers colleges during 1950-51 were equal scholastically to those of 1944, although there were nearly double the number of freshmen in 1950. This would indicate that in spite of doubling the number of freshmen the scholarship standards have not been appreciably lowered.

College Moves

PURCHASE, N.Y.—The Manhattanville College of the Sacred Heart has moved from New York City to Westchester County. Its 410 students are now occupying four modern college buildings constructed during the last 16 months. The administration building of the college is the former residence of Mr. and Mrs. Whitelaw Reid. The Manhattan site of the college was sold to the city of New York in record condemnation proceedings for \$8,808,620 and will be added to the City College campus.



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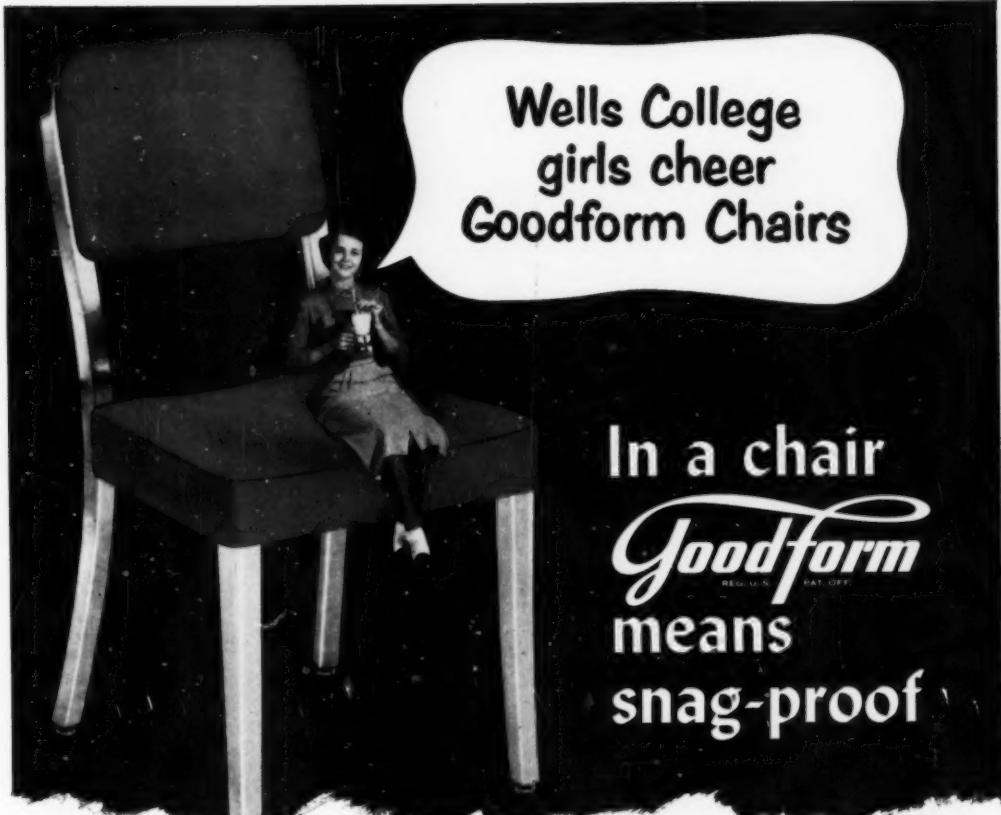


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NEWS

Alumni Roll Call Is Real Aid to Johns Hopkins

BALTIMORE.—Johns Hopkins University had a net increase in its endowment funds of \$2,982,982 during the past fiscal year and a net addition of \$1,003,442 to its plant funds. These increases raised the total book value of the university's endowment to \$40,694,610 with a current market value of \$49,334,460. The increase brought the physical plant assets to

\$20,192,225. The figures are contained in the 1951-52 report issued last month by Henry S. Baker, treasurer, and released by Dr. Detlev W. Bronk, president of Johns Hopkins University.

Mr. Baker's report indicated that the annual alumni roll call continued to make a significant contribution to the income of the university. Operating on a calendar year, \$120,270 was given in 1951 by the alumni and friends of the university.

Notre Dame Protests "Life" Football Pictures

NOTRE DAME, IND.—The University of Notre Dame has accused *Life* magazine of "gross misrepresentations" in a picture-story on the Notre Dame football team that appeared in the issue of September 29.

In a formal statement, the Rev. Edmund P. Joyce, C.S.C., executive vice president of the university and chairman of its faculty board in control of athletics, cited "glaring inaccuracies in a publication that prides itself upon an accurate portrayal of American life and institutions."

"Four players, with most of their front teeth 'missing,' were pictured as representative of Notre Dame's present football team," Father Joyce said. "The facts are these: Two of the players pictured by *Life* have never participated in a Notre Dame game. Three of the four pictured were falsely identified as well known varsity players. Three of the falsely identified varsity players are still smiling with their own front teeth," he added.

Seeking to reassure the parents of thousands of American boys who participate in America's most popular sport, Father Joyce cited statistics to refute the implication that most football players are toothless. "Ninety-four per cent of our varsity squad have never lost a tooth playing football at Notre Dame; three out of 50 players have," he said. "As for high school football, only one of the other players (one pictured in *Life*) lost some teeth in high school competition."

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NEWS . . .

Students Quiz New President on Communism

NEW YORK.—A quiz session served as an introduction of the new president, Dr. Buell F. Gallagher, to members of the uptown student body of City College in mid-October. In the great hall of the college, some twelve hundred students bombarded Dr. Gallagher with questions over microphones set up throughout the hall. Most of the questions related to com-

munism, its teaching in the college, dismissal of teachers who were alleged Communists, and the like.

In an address before the question period, Dr. Gallagher said: "I would not knowingly accept as an instructor any racist, Fascist or Communist. The dogma of the closed mind has no place in a citadel of learning. The strength of democracy derives from a genuine affection for diversity. I am unalterably opposed to any form of tyranny over the human mind."

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Home Building Industry Wants Professional Training

WASHINGTON, D.C.—A strong drive to persuade colleges and universities to offer both degree and extension courses in the business of home building is under way. It is instigated by the home building industry, particularly through the National Association of Home Builders.

Latest figures show that there are throughout the nation 44 degree courses, 38 short courses, and 27 night courses in various aspects of home building and merchandising.

Trinity University at San Antonio, Tex., has a new course in the business of home building which carries a B.S. degree in business administration. The national home builders association, the local home builders association, the university, and the housing research foundation of the Southwest Research Institute cooperated on the course.

The University of Houston has a degree course sponsored by the local association of home builders in cooperation with the local chapter of the Associated General Contractors of America, the real estate board, and the retail lumber dealers' association. Houston building officials have announced nine scholarships for this course.

The University of Denver and Rutgers University, New Brunswick, N.J., also have courses.

Warns Colleges About Military Research

SOUTH HADLEY, MASS.—Government and military research projects are hampering the true functions of the colleges and are menacing future scientific research in this country, an atomic scientist, Dr. George S. Kistiakowsky, told those who attended the two-day convocation on science and human values at Mount Holyoke College here in early October.

Government research contracts are tending to convert graduate schools into "commercial development establishments," Dr. Kistiakowsky declared.

"I see ourselves threatened with a generation of scientific workers," the scientist said, "who know how to carry out instructions and to follow in the footsteps of others but who have not learned how to discover a rewarding research problem, how to plan the at-

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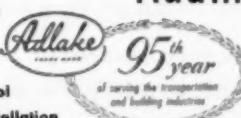
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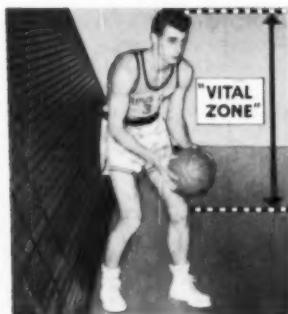
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■ With the gymseats folded and the partition closed, your gym is actually two separate units. With seats extended and the electrically operated partition recessed in the walls, it's an exhibition gym that pays its own way.

For planning that gives you three gyms in one, plan with Horn. Horn equipment gives you the design you need for efficient use of space, and the quality of construction you need for long years of trouble-free service. Horn representatives in your area will help you plan your three gyms in one . . . Horn factory crews will supervise your installation.

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SCHOOL EQUIPMENT

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NEWS

tack on it, and how to solve it. And whether we are training the students for industrial leadership or, perchance, for the life of a college scientist, we are not doing a good job in this way."

The former chief of the explosive division of the Atomic Research Laboratory at Los Alamos, N.M. (1944-45), advised colleges to develop a consistent policy of "doing only research that is not in conflict with the principles of good education." He urged scientists to work out advisory programs for the military research establishments "to ensure the needed information to the Department of Defense without damaging our chances of long-range survival."

Some seven hundred alumnae and invited representatives from the fields of education, science, business and industry heard Dr. Kistiakowsky and other speakers, including Dr. Karl T. Compton of M.I.T., Dr. Margaret Clapp of Wellesley, Sir Charles Darwin, and Robert C. Swain, vice president of the American Cyanamid Company.

Mr. Swain told his audience that while 75,000 science majors were graduated by colleges and universities in 1950, this year the number will probably be less than half of that. He attributed the decline to poor instruction in science in the secondary schools where "too many of our science teachers are only one chapter ahead of their class."

Television Courses

TOLEDO, OHIO.—The University of Toledo, as a part of its adult education program, is offering two half-hour TV programs daily. Station WSPD-TV, as a public service, is donating the time. Viewers receive written assignments, which they complete and return by mail, and final examinations will be given at the university. Being given is a two-hour credit course in Ohio history and a one-hour credit course in modern homemaking.

Federal Scholarships

WASHINGTON, D.C.—When the new Congress convenes, a bill authorizing federal scholarships for high school graduates of demonstrated ability will be introduced, it is declared. The amount to be sought is reported to be \$30,000,000, nearly twice as much as asked for in the 1950 bill.

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NEWS.

Illinois Tech Dedicates New Memorial Chapel

CHICAGO.—The first ecclesiastical structure to be designed by the internationally known architect, Ludwig Mies van der Rohe, director of architecture at Illinois Institute of Technology, was dedicated on October 26. The special religious structure for staff and students of Illinois Tech is called the Robert F. Carr Memorial Chapel of St. Saviour.

As in other Mies van der Rohe architecture, glass plays a dominant rôle in this chapel. East and west exposures are floor-to-roof glass panes; the eastern, or front, pane is transparent; the western, translucent.

The altar is a 7½ ton block of unadorned imported Roman Travertine marble. The altar rail and the altar cross, the latter 10 feet high by 6 feet wide, are of stainless steel. The cross is hung in front of floor-to-ceiling drapery of imported raw silk of natural hue.

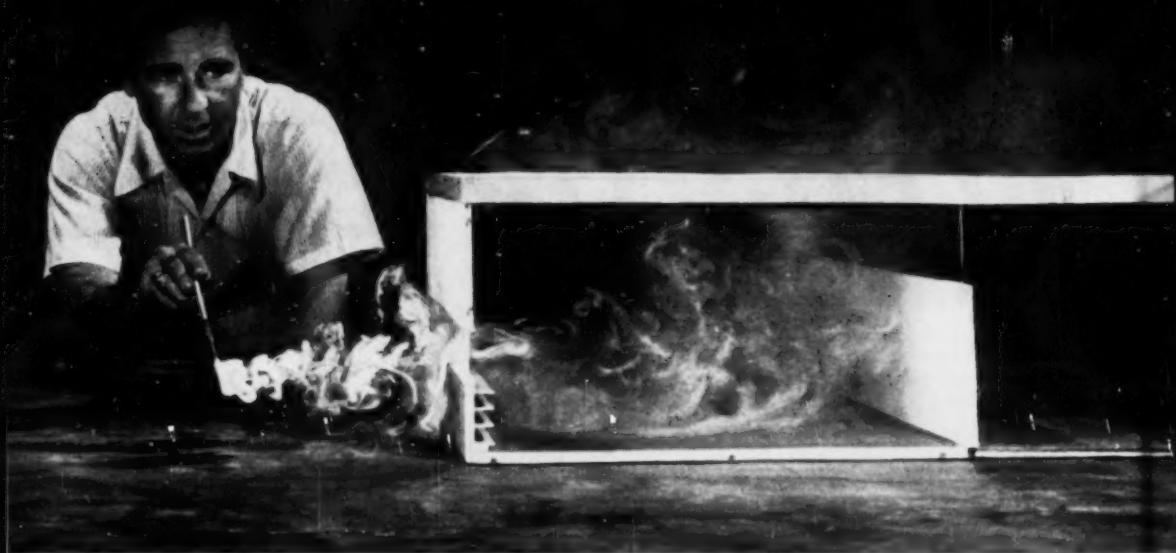
Lighting is subdued, with invisible spotlights set in the exposed steel roof supports played on the unfinished interior brick walls. Episcopal services will be held on Sunday mornings and interdenominational services in the afternoon.

Hotel Gives Scholarship

BROOKLYN, N.Y. — A local hotel, the Granada, has awarded the first four-year scholarship of an annual series to Long Island University. Termed the "good neighborhood scholarship," the hotel's sponsorship program includes payment of full tuition for four years, a part-time job if the student needs additional financial assistance while attending classes, and aid in getting a "responsible job" after graduation. LIU will select the student to receive the scholarship.

Course for Executives

YPSILANTI, MICH. — The Cleary College Graduate School of Business Administration here has inaugurated an executive administration program. It is designed for college graduates and others with substantial executive experience at the management level and is a two-year course. Two and one-half hour classes are held on Monday and Wednesday evenings.



Introducing smoke into the schoolroom model to make air flow visible.
Ronald Chatham photo

VENTILATION GOES TO SCHOOL

Texas Engineering Experiment Station tests show what kinds of windows and window detailing provide the best warm-weather ventilation

IF SCHOOLROOM—or plant—ventilation is a problem that concerns you, here's a report from the pages of "Architectural Forum" we know you'll want to read.

In it, you'll see how sun hoods, window types, and outlet wall openings effect the over-all air flow

pattern throughout the room . . . how, with proper design, schoolrooms can be made comfortable—even in hot weather.

If you missed reading this factual and timely report, we'll be glad to send you a copy. Just mail the coupon.



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Send me a copy of the "Forum's" report: "Well-Ventilated Schoolrooms."

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NEWS . . .

North Carolina State Building Atomic Reactor

RALEIGH, N.C.—Before the year ends the first privately owned and operated atomic reactor should be completed on the campus of the North Carolina State College here. It will be the only reactor devoted entirely to unclassified research.

Twelve or more nuclear reactors are in operation in the United States but none is operated outside the restricted

areas of the Atomic Energy Commission. Too, this installation will permit the public to view scientists using the tools of atomic power in varied fields of research.

The squat reinforced concrete structure, when completed, will house uranium in liquid form, the first time the A.E.C. has made any allocation of fissionable fuel outside its own facilities, it is said.

Research already begun at North Carolina State with borrowed materials

in the field of agriculture will be extended to zoology, botany, chemistry, medicine, metallurgy, textiles and other fields when the reactor is in operation. Another purpose of the installation is the training of nuclear scientists of whom more than 70 are enrolled at the state college.

International Studies Center Gets Million Dollars

CAMBRIDGE, MASS.—The first large grant to M.I.T.'s new Center for International Studies has come from the Ford Foundation and adds up to \$1,000,000, President James R. Killian Jr. announces.

One part of the grant, for \$875,000, will finance a four-year study of the nature of information and ideas that reach various kinds of people in foreign countries, the channels by which they are conveyed, and the factors affecting the way people interpret the information and the way they react to it.

The other \$125,000 will cover support for a one-year period of studies of ways in which foreign countries might employ their resources to raise their living standards. It is believed that this study will deal particularly with India, Indonesia and Italy.

On a part-time basis some thirty members of the faculties of M.I.T., Harvard, and Boston University participate in the work of the Center for International Studies, with M.I.T. administering the project. M.I.T. reimburses the two other universities for the time their faculty members spend as employees of M.I.T.

Patterson Memorial

SCHENECTADY, N.Y.—An endowed professorship of American government and endowed scholarships in preparation for careers of public service at Union College here have been announced. They will be a memorial to Robert P. Patterson, former secretary of war, and an alumnus of Union. In addition to the professorship, scholarships and fellowships, a third portion of the memorial fund being raised will provide for special conferences, workshops and publications. The sum of \$100,000 has already been received from American corporations, their executives, and friends of the late Judge Patterson.

IN COLLEGES TOO... MULTI-MATIC cuts Payroll Time in half

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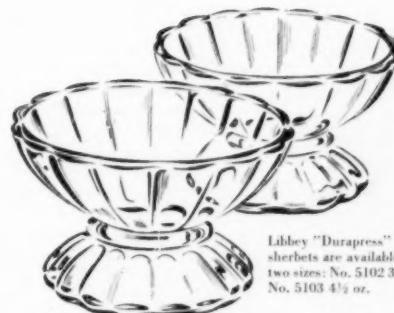
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YOU ASKED US for them and here they are: "Durapress" sodas and sundaes to match the already popular "Durapress" sherbets.

Made of Libbey's regular high-quality glass, these two items have a heavy glass base, modern shape, and appealing, easy-to-clean contour. "Durapress" glassware is low in cost, yet amazingly strong and durable. And, the Libbey name is your guarantee of quality.

Make sodas and sundaes you serve look more tempting. Serve them in sparkling glass. Folks know food tastes better, too, because glass gives *absolute* flavor protection . . . will never impart taste.

Your Libbey supplier is ready with samples and prices. See him or write direct to Libbey Glass, Toledo 1, Ohio.



Libbey "Durapress" sherbets are available in two sizes: No. 5102 3 1/2 oz.; No. 5103 4 1/2 oz.

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IN THE INDUSTRY



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If you want your money's worth—and more—in a folding chair, then compare Clarin with any other folding chair on the market before you buy. It will pay you.

For here is what Clarin offers:

A stronger chair, welded wherever possible, not riveted.

A safer X-type chair, so designed it won't collapse, tip or fold, even though you stand on it.

A more comfortable chair, of the proper width

and height, posture-designed to give you the maximum of comfort, because seat and back are scientifically placed to distribute and support your weight properly.

It is self-leveling.

A more convenient chair, because it folds flat within its own frame quickly and easily, thus making for fast, safe, non-wobbly stacking in a minimum of space.

A more economical chair because the quality of its construction, its materials and enamel is so fine that we can give the only written 10-year guarantee of satisfactory service.

Only in Clarin will you find all these and many other exclusive advantages. So compare Clarin before you buy. Clarin Mfg. Company, Dept. 9, 4640 W. Harrison St., Chicago 44, Ill.

There is a Clarin Folding Chair for every purpose and need. Write today on your institution's letterhead for beautiful, new, FREE Catalog of the complete line.



Clarin Juvenile Folding Chairs are built with the same faithful quality as Clarin Adult Chairs. They differ only in size. Style 212-W, ages to 7 yrs. Style 214-W, ages to 9 yrs.



SINCE 1926...THE ARISTOCRAT OF FOLDING CHAIRS

NEWS.....

Organize Development Council at Michigan

ANN ARBOR, MICH.—A development council, the purpose of which is to strengthen the university's financial position and to instill more interest in its public responsibilities, is being organized by the University of Michigan.

Alan W. MacCarthy, who since 1948 has been campaign director of the Michigan Memorial-Phoenix Project, will be director of the council. One of the council's first activities, according to President Harlan Hatcher of the university, is to raise the final \$500,000 of the \$6,500,000 goal for peacetime atomic energy research, the Phoenix Project.

The development council is being designed to satisfy certain needs that would not otherwise be provided for through legislative channels.

N.Y.U.'s 10 Year Plan Calls for \$102,000,000

NEW YORK.—"Based on a realistic study of space needs and costs of operation," New York University last month announced a 10 year \$102,105,000 development program, about half of which is for buildings and the other half for endowment.

A few days after the announcement of the plan by Chancellor Henry T. Heald, the chancellor, speaking from the steps of the library on the University Heights campus, told 2500 cheering students that as the first gift Frank Jay Gould has donated \$1,500,000 for a student center to relieve the overcrowded and inadequate facilities on that campus.

The N.Y.U. 10 year program is believed to be the largest publicly announced development program in the history of privately supported higher education. The \$52,105,000 building part of the program is to construct 14 buildings at five of the university's six New York City locations, the completion of one building now under construction, and additions to two others. The amount also includes funds to remove the indebtedness of one of the university's recently constructed buildings.

The endowment needs of the university are listed by Chancellor Heald as \$50,000,000 for general purposes, increases in faculty salaries, operating

NEWS.

expenses, and new educational program.

Charles R. Cox, president of the Kennecott Copper Corporation, is chairman of a special development committee of the university's governing council. Vice Chancellor Frank L. Howley heads the university development program staff. Needs of the university are determined by a standing faculty committee headed by Dr. David D. Henry, executive vice chancellor, and former president of Wayne University, Detroit.

Fund raising activities will be in the hands of special committees of the governing council and of the medical center, committees of the alumni association, and special committees for the college of engineering and the graduate school of business administration.

Dayton's 10 Year Program of Development Begun

DAYTON, OHIO. — The first step in the University of Dayton's plant development program, which will add five new buildings and a library addition to the campus in the next 10 years, is being taken with the construction of a men's residence hall for 432 students. The university has a loan of \$1,320,000 from the federal Housing and Home Finance Agency to aid in the construction.

This school, which had an enrollment of 700 in 1940, now has 2050 students and expects that enrollment to be doubled before all the new buildings are completed.

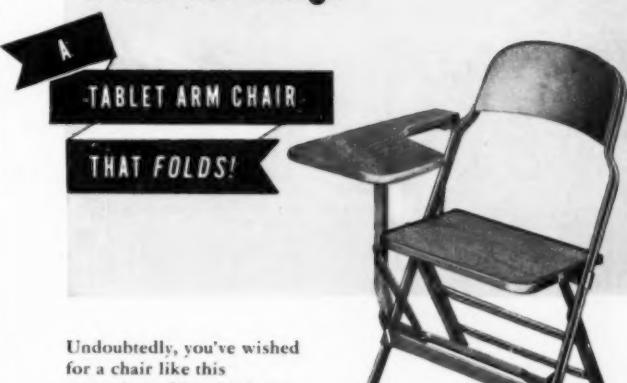
The Society of Mary operates the school. Recently an associate board of lay trustees has been reactivated, Father George J. Renniker, S.M., the president announces.

Administrators Meet

DETROIT.—In their annual one-day meeting administrators of 67 member institutions of the Association of Urban Universities on October 27 heard Edgar A. Guest, newspaper poet, and Francis J. Brown of the American Council on Education. Dr. Brown's "News Notes From Washington 1952" is an annual feature. The sessions were held at a hotel adjacent to Wayne University campus, and a number of delegates stayed over for a campus tour the following morning and also to visit the University of Detroit.

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For Emergency Classroom Use Conferences...Lectures Staff Meetings



Undoubtedly, you've wished for a chair like this many times. Now it's here—perfected—ready to go to work for you. Here is permanent convenience and comfort adapted for emergency use—the greatest advance in the history of folding chairs.

The tablet arm is a built-in feature of the chair, not an attachment. It is strong, easy to operate, a marvel of engineering ingenuity (patent pending). For ordinary chair use when the arm is not needed, it folds down, out of the way, beside the chair, and flat *against* the chair for quick, safe stacking. The flat, folded depth of the chair is only 3 inches. The chair can be folded or unfolded in a matter of seconds. It is exceptionally easy to get into and out of.

Built throughout with all the famous Clarin insistence on utmost quality, the Clarin Tablet Arm Folding Chair will give years of faithful service. It is a supremely strong X-type chair, self-leveling, welded to insure exceptional strength and quietness. Its cushioned rubber feet, a Clarin exclusive, can't mar the finest floor. It comes with Clarin's famous reinforced seat of 5-ply plywood, or it can be had with fine quality leatherette on seat and back, or on seat alone. Available in wide range of frame and upholstery colors.

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SINCE 1925 . . . THE ARISTOCRAT OF FOLDING CHAIRS

NEWS

N.Y.C. Board Ousts Three Professors in Red Query

NEW YORK.—Acting unanimously, the New York City Board of Higher Education on October 6 dismissed three municipal college professors for their refusal to answer questions about alleged Communist party membership before the Senate internal security subcommittee.

Those dismissed were Bernard F. Riess, associate professor of psychology

and philosophy at Hunter; Harry Slochower, associate professor of German at Brooklyn, and Vera Shlakman, assistant professor of economics at Queens. Professors Slochower and Shlakman appealed to the board to grant them a full public hearing.

A week earlier the New York City Board of Education "vacated" the jobs of six public school teachers for similar reasons and under the same Section 903 of the city charter.



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Rutgers Develops Cheaper Road Building Method

NEW BRUNSWICK, N.J.—A new highway construction method has been perfected by the joint highway research project at the state university here.

This new process, achieved by combining vibrators with conventional rollers in compacting road base materials, produces a longer lasting base at a considerably lower cost, it is reported. Appreciable savings are realized because construction operations are speeded up, reducing labor and equipment costs.

Technical details on the project are contained in a report, "Dynamic Compaction of Soil," by Dr. Rudolf K. Bernhard, Rutgers professor of engineering mechanics and director of the project.

To Serve Business Groups

KNOXVILLE, TENN.—Business and professional groups in the state will be invited to make use of the University of Tennessee's new million-dollar college of business administration building. The classroom building was dedicated on October 16. Certain facilities, like the executive conference room and a small auditorium with tiered seats, were planned almost entirely with business conferences and institutes in mind.

Yearbook Innovation

COLUMBUS, OHIO.—The student yearbook for 1953 at Ohio State University will be "wired for sound." Along with the book, subscribers will get a phonograph record on which are recorded the highlights of the 1952-53 school year, including voices of university officials, visiting VIPs, big moments in football games, and bits from the university's homecoming rally and dance.

Four Colleges Get Library

CLAREMONT, CALIF.—The new \$1,250,000 four-story library building that will serve the four associated colleges here—Pomona, Claremont, Scripps and Claremont Men's—was dedicated on October 23. It is called Honnold Library, after William L. Honnold, a gold mining engineer, who pledged \$1,000,000 for the construction of the building in 1946.

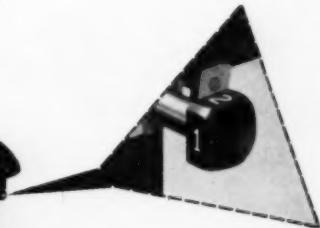
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Speed and ease are inseparable in a Sensimatic because high productivity is built right into the machine. The sensing panel or "mechanical brain" directs the machine swiftly and automatically through every figuring operation and carriage movement.

Because of this, there's less for the operator to learn and to do. Every operator function has been simplified to require minimum effort. Even the insertion and alignment of forms has been made so easy that important amounts of time are saved in this one part of the work alone. It will be to your advantage to see a Sensimatic in action. At the very least, you'll have a new basis for judging accounting machine performance.

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Sensimatic 300 with 11 totals
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Sensimatic 100 with 2 totals

WHEREVER THERE'S BUSINESS THERE'S



NEWS

New Jesuit Seminary

SHRUB OAK, N.Y.—Here on one of the highest hill tops in Westchester County will rise the buildings of the new \$5,000,000 Loyola Seminary, the first major Jesuit seminary in New York State. The buildings will occupy part of a 336 acre site. Voorhees, Walker, Foley & Smith of New York City are architects for the project, which is expected to be completed in two years. The seminary will have facilities for training 300 Jesuit schol-

astics for most of the 15 years of study leading to ministry in the Society of Jesus.

Form New Conference

CHICAGO.—Ten colleges in the Upper Midwest and in Canada have formed a conference to strengthen the cause of Christian education through the liberal arts curriculum and to promote this cause before the public. Making up the new conference are the following colleges: Lake Forest,

Macalester, Augustana, Jamestown, Carroll, Hamline, North Central, St. Olaf, Simpson, United of Winnipeg,

Waksman of Rutgers Gets Nobel Medicine Prize

STOCKHOLM, SWEDEN.—The 1952 Nobel prize for medicine was awarded October 23 to Dr. Selman W. Waksman of Rutgers University, co-discoverer of streptomycin. This year's prize was worth \$33,037.

Dr. Waksman has won for himself and for Rutgers world fame and fortune from the royalties on the several antibiotics he has discovered. The Rutgers Research and Endowment Foundation is the beneficiary of the royalties from drug manufacturers. Dr. Waksman retains 10 per cent for himself and another 10 per cent is split among other scientists who helped make the original discoveries.

Annual Scholarships Plus

ITHACA, N.Y.—Three \$800 scholarships each year for upper classmen in the Cornell University College of Engineering have been awarded by the American Brakeshoe Company. Each \$800 scholarship grant will be matched by a contribution of the same amount to the university's operating funds, it was announced October 29. Candidates for the scholarships will be chosen by a faculty committee, but the company will have the privilege of making the final selections.

Chicago Will Offer Loans to Korean Veterans

CHICAGO.—Special loans to Korean veterans covering full tuition fees for a four-year course will be offered by the University of Chicago, it was announced on October 30.

The dean of students, Robert M. Strozier, declared that financial aid is considered necessary under the amended G.I. bill for Korean veterans, if these former servicemen are to be able to devote themselves to their studies.

In Atom Research Group

DETROIT.—Wayne University has been unanimously elected to the 32 member council of participating institutions of the Argonne National Laboratory, which is operated by the University of Chicago for the Atomic Energy Commission.

LAYKOLD gives your school's tennis team—and tennis players—the same surfaces that make more national champions than any other playing surface. Your LAYKOLD engineer can help you. Call him today!

Modest first cost, but more important to you, *lowest* upkeep. You get maximum use from LAYKOLD or super-resilient GRASSTEX tennis courts—throughout the seasons.

Fines all-weather surfaces in tennis make playing more enjoyable, and *protect your investment*. For resurfacing of old courts—LAYKOLD products are easily applied at low cost.

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"Budget Wise -- our best buy was **Textolite* table tops"**

says Principal A. D. Gaskin of Woodlawn Elementary School, Augusta, Ga.

"LAST spring we specified tan-linen finished G-E Textolite* tops for the new tables for our cafeteria and we are very well satisfied with the installation," reports Mr. Gaskin.

"When it came time to specify the material, Mrs. H. W. Hattaway, lunchroom supervisor, was interested in a table top which would have a fresh, clean look — easy to clean — and stain resistant.

"As principal, I was interested from a long-range point of view. The tops had to have long life and low maintenance cost — to fit our long-range budgeting.

"The material that fit all these specifications was G-E TEXTOLITE*."

When you want the best in tops for your school furniture, specify G-E TEXTOLITE* and you'll be just as satisfied as Mr. Gaskin. G-E TEXTOLITE* is scratch and heat resistant, withstands boiling water, scalding greases. It is stain resistant, sheds fruit juices, ordinary household chemicals and acids without a trace.

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President: Charles D. Owens, University of Washington; secretary-treasurer: Edgar

A. Whiting, Cornell University; editor of publication: Porter Butts, University of Wisconsin.

Conference: April 16-19, Claremont Hotel, Berkeley, Calif.

National Association of Educational Buyers

President: Kermit A. Jacobson, California Institute of Technology; executive secretary: Bert C. Ahrens, 1461 Franklin Ave., Garden City, N.Y.

Association of College and University Business Officers

American Association

President: J. R. E. Lee Jr., Florida A. & M. College; secretary: L. H. Foster Jr., Tuskegee Institute.

Convention: May 3-5, Fort Valley State College, Fort Valley, Ga.

Central Association

President: Bruce Pollock, Carleton College; secretary-treasurer: C. C. De Long, University of Illinois.

Eastern Association

President: Charles H. Wheeler III, University of Richmond; secretary-treasurer, Irwin K. French, Wellesley College.

Convention: Nov. 30-Dec. 2, Chalfonte-Haddon Hall, Atlantic City, N.J.

Southern Association

President: Frank D. Peterson, University of Kentucky; secretary-treasurer: Gerald D. Henderson, Vanderbilt University.

Western Association

President: Robert W. Fenix, Willamette University; secretary-treasurer: William Milliken, St. Mary's College of California.

Convention: May 10-12, Empress Hotel, Victoria, B.C., Can.

American College Public Relations Association

President: Edward P. Vonderhaar, Xavier University, Cincinnati.

Convention: 1953, Salt Lake City.

Association of Physical Plant Administrators of Universities and Colleges

President: Edward Pardon, University of Michigan; secretary-treasurer: A. F. Galliher, University of Wisconsin.

Convention: May 11-13, Alabama Polytechnic Institute, Auburn, Ala.

National Association of College Stores

President: H. R. Ritchie, University of North Carolina Book Exchange, Chapel Hill; executive secretary: Russell Reynolds, Box 58, 33 West College Street, Oberlin, Ohio.

College and University Personnel Association

President: Hedwin Anderson, University of Minnesota; secretary-treasurer: Clara Stimson, University of Rochester; executive secretary, Donald E. Dickason, University of Illinois. Permanent headquarters, 809 S. Wright St., Champaign, Ill.

Convention: July 1953, Michigan State College, East Lansing.

National Association of College and University Housing Officers

President: Kenneth D. Lawson, Michigan State College; vice president: M. R. Shaw, Cornell University; secretary-treasurer: Ruth N. Donnelly, University of California, Berkeley.

Convention: August, University of Minnesota.

COLLEGE and UNIVERSITY BUSINESS

*Bell music without a tower?
yes--with
"Carillonic Bells!"*



Your Church—with or without a tower—can bring a new spiritual awareness to the community with "Carillonic Bells". At the touch of a finger, or automatically, their beautiful true bell music carries your church's message to all who hear—at a fraction of the cost of cast bells.

They are light in weight, yet 25 "Carillonic Bells" provide the same musical range and volume of cast bells weighing 73,000 pounds. Write for complete information.

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LUDMAN

THE NEW **Auto-Lok**

AUTOMATIC LOCKING
PATENTED

SCHOOL WINDOW

Sturdy "push-out" control bar plus famous standard Auto-Lok features make this new window outstanding for all school applications! For the first time, here is a window that meets all the problems of windows that are operated and regulated by school children. Here is a window exclusively designed and engineered to withstand any abuse . . . to provide ideal circulation . . . fresh air all the time, even when it's raining . . . and gives a positive tight closure which eliminates the "cold zone" around windows.

A NEW **Auto-Lok** CONTROL BAR

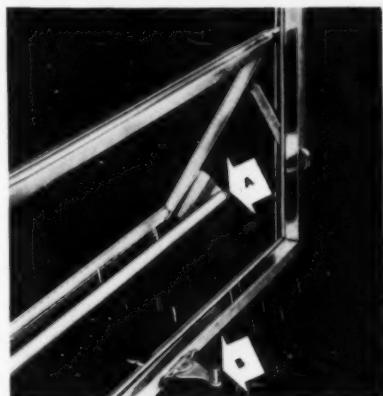
Simple and effortless for even the youngest child! Smooth aluminum alloy bar takes the place of slower turning operator. Reduces window operation effort to an absolute minimum. No maintenance, no adjustments ever!

B NEW **Auto-Lok** SAFETY-LOK

Improved locking feature securely locks bottom vent . . . extra protection against intruders. Center position makes it handier, more accessible.



TIGHTEST CLOSING WINDOW EVER MADE!
SEALS SHUT LIKE THE DOOR
OF YOUR REFRIGERATOR



NEW OPERATIONAL EASE

No cranking . . . just push out or pull in. Open wide or just a fraction, vents stay put.

NEW INSTANTANEOUS WEATHER CONTROL

All vents open or close tight as a refrigerator door in less than one second.

ABSOLUTELY INJURY-PROOF!

Nothing to pinch or snag. Completely concealed operating mechanism provides "weightless balance" . . . no straining.

NEW MAINTENANCE ECONOMY

No operator handles to break, no gears to strip. Operating mechanism never needs replacement parts or adjustment.

LIFETIME TROUBLE-FREE OPERATION

Auto-Lok windows result from years of study of school needs. They're guaranteed to last a lifetime under the most severe usage.



LUDMAN LEADS THE WORLD IN WINDOW ENGINEERING

NEWS

NAMES IN THE NEWS



Rev. E. B. Bunn
Rev. Edward Bernard Bunn, S.J., regent of the Georgetown Dental School and the School of Nursing, has been named president of Georgetown

University, Washington, D.C. He replaces the Rev. Hunter Guthrie, S.J., who has been on leave since July.

Robert V. Bartz has been appointed executive director of the Industrial Associates of the California Institute of Technology at Pasadena. The Caltech Industrial Associates, initiated about two years ago, now include 23 member companies representing the oil, aircraft, steel, chemicals, manufacturing and other industries.

George B. O'Gorman resigned as purchasing agent of the City College of New York to become director of purchases for the city of Philadelphia.

Edward L. Johnstone, superintendent of State Colony, Woodbine, N.J., a school for the mentally deficient, has been elected president of the Woods Schools, Langhorne, Pa. Mr. Johnstone, who succeeds Mollie Woods Hare, who founded the Woods Schools for exceptional children in 1913, is expected to assume the presidency on or about the first of the year. Mrs. Hare was elected honorary president.

Norman N. Thornton is the new business manager at St. Andrew's School in Middletown, Del. Before joining the staff at St. Andrew's in September, Mr. Thornton was a buyer of maintenance materials in the purchasing department of Harvard University and was also employed by the Helio Aircraft Corporation as purchasing agent, personnel manager, and controller.

M. W. McGill, the recently appointed assistant treasurer and bursar of Davidson College, Davidson, N.C., had previously served as auditor of the college. D. Grier Martin is treasurer and business manager of Davidson College.

Louis William Norris was inaugurated as president of MacMurray College, Jacksonville, Ill., on October 24. Dr. Norris was formerly dean of students at DePauw University, Greencastle, Ind.

Victor C. Crafton has been appointed assistant bursar at Upper Iowa University, Fayette, Iowa. For the past year he had been manager of the Craighead County Arkansas Farmers Cooperative.

James Woodin Laurie was inaugurated as the fourteenth president of Trinity University, San Antonio, Tex., on October 8. Dr. Laurie, who had previously served as pastor of Central Presbyterian Church, Buffalo, N.Y., assumed the presidency of the coeducational college last December.

Fred P. Lang has been named treasurer of Middlebury College, Middlebury, Vt., to succeed George H. V. Allen, who retired. Mr. Allen, treasurer



E. L. Johnstone



M. W. McGill



with VES-COTE FLOOR WAX

Floors finished with VES-COTE give new safety to walking. The reason: Vestal's "know-how" in formulating VES-COTE with "LUDOX", to provide a slip resistant surface. The millions of tiny Ludox particles—integral parts of VES-COTE—act as "STOPPERS" whenever a shoe touches them . . . actually grip the shoe with each step.

In addition to walking safety, VES-COTE dries to a high lustre; is long wearing; water resistant; easy to apply and dries quickly. With VES-COTE you can have eye-pleasing floors that are safe to walk on.

Approved by the Underwriters Laboratories



When you step on Ves-Cote, the weight of the foot forces the hard Ludox® colloidal silica spheres into the floor surface, creating superior gripping power. This is how Ves-Cote gives greater slip protection.



INCORPORATED

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Sound movies-teach fast, effectively!

Every week more and more movies are used as a regular part of instructional programs. Educators recognize that audio-visual methods are the modern, effective aid to teaching.

Now sound movies can get the desired message across more effectively than ever because the sound track can be changed

easily to fit a specific need. The Filmosound 202 recording projector permits adding sound to any 16mm movie and changing the message as often as desired.

Wherever sound movies can serve you best—for information or for entertainment—look to Bell & Howell for the finest equipment and service money can buy!

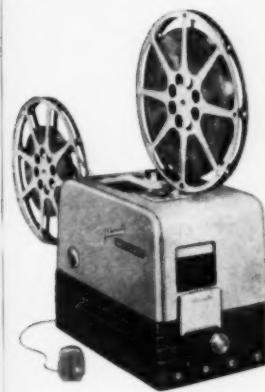


"Old Betsy"—the first Filmosound ever sold—is retired after 20 years of valuable service to the Elgin (Ill.) Public Schools. E. C. Waggoner considers sound movies so vital that he replaced "Betsy" with the first Filmosound 202 magnetic recording projector, to provide up-to-date audio-visual techniques.



More than three thousand classroom showings of movies every year! The Pawtucket (R.I.) Schools' film library, a success from its start over ten years ago, today uses twenty 16mm sound projectors. Modern Bell & Howell equipment assures the continued success of Pawtucket's film program.

Now! Two great FILMOSOUNDS



Filmosound 202 16mm recording projector lets you add sound to movies easily, inexpensively. Make your own sound movies... add sound to old silent films. Sound can be changed again and again. Plays both optical and magnetic sound. From \$699.



Filmosound 285 16 mm optical sound projector. Shows sound or silent film. Full, natural sound at all volume levels. With 6" built-in speaker... only \$449.95. Other separate speakers are available.

All Bell & Howell products are guaranteed for life!

"Education Molds Our Future... Better Schools Build a Stronger America"



Bell & Howell Company
7192 McCormick Road, Chicago 43, Ill.
Please send me, without cost or obligation, complete information on sound movie equipment for use in:

Industry Church
 Home School

Name _____

Address _____

Organization (if any) _____

City _____ County _____ State _____

Bell & Howell

NEWS . . .

of the college since 1939, will remain as a trustee.



Harold V. Neece

Harold V. Neece, business manager of Northwest Missouri State College, Maryville, since 1946, has been named business manager of Coe College, Cedar Rapids, Iowa. His appointment will become effective No-

vember 15. Mr. Neece succeeds **Howard H. Brooks**, who was named president of the college last spring.

Luther L. Gobbel has been appointed president of Lambuth College, Jackson, Tenn., to succeed **Richard E. Womack**, now president emeritus. Mr. Gobbel was formerly president of Greensboro College, Greensboro, N.C.

Sister Alice Gertrude is now president of Emmanuel College, Boston, having succeeded **Sister Margaret Patricia** in that capacity.

Loring M. Thompson is the recently appointed assistant to **President Asa S. Knowles** at the University of Toledo. Mr.

Thompson, also associate professor of industrial engineering, spent the last year at the University of Chicago working toward the doctorate in planning. He served under President Knowles at Northeastern University in Boston and at the Associated Colleges of Upper New York.

Charles Pinckney Hogarth was inaugurated as president of Mississippi State College for Women, Columbus, on October 24. He succeeded **Burney L. Parkinson**, who retired in July. Dr. Hogarth had been president of Gulf Park College, Gulfport, Miss., for the last two years.

John Conrad Seegers, dean of Temple University Teachers College, has been elected president of Muhlenberg College, Allentown, Pa. Dr. Seegers is the first alumnus to hold that position in the college's 105 year history.

Wilber M. Douglass has been made assistant business manager at the University of Oregon to serve under **Orville Lindstrom**. Mr. Douglass was formerly an accountant on the staff of the business manager at Oregon State College.

G. Brooks Earnest has been elected to the presidency of Fenn College, Cleveland. Mr. Earnest, an engineering instructor at Case Institute of Technology for 20 years, joined Fenn as dean of engineering in 1951 and was appointed acting president last February.

V. T. Smith, who resigned as president of Upper Iowa University at Fayette, Iowa, last summer when he reached the retirement age, is now dean of the college at the College of the Ozarks, Clarksville, Ark.

Alf E. Brandin, business manager of Stanford University, Stanford, Calif., has assumed additional responsibilities as the university's executive officer for land development. He will have charge of development of some 6000 acres of Stanford land for residential, commercial, professional and light industrial use. A recent expansion in the university business office at Stanford included



L. M. Thompson



Model 451 Chairs in the Music Hall



SOLID KUMFORT at DUKE UNIVERSITY DURHAM, NORTH CAROLINA



MODEL 451

SOLID KUMFORT Chairs were selected by Duke University because of their beauty and comfort and the ease with which they can be moved. They are styled to harmonize with the finest interiors. Frames of hardwood joined by the famous Rastetter hinge and brace give these chairs the strength to withstand hard, constant use. They have the added advantage of foldability. Write today for catalog of Magnesium and Wood Chairs That Fold.



LOUIS RASTETTER AND SONS COMPANY
ESTABLISHED 1880
FINE FURNITURE THAT FOLDS 1325 WALL STREET FORT WAYNE 1, IND.



Specialists in Maintenance Cleaning Products



TAKE YOUR PICK

Here are two superior Wyandotte cleaners for floors, walls,
painted surfaces—one ALL-SOLUBLE, one MILDLY ABRASIVE!

F-100

WYANDOTTE F-100* dissolves quickly and completely . . . rinses freely. Just two ounces make one gallon of powerful cleaning solution, giving you great savings over comparable quality cleaners. F-100 is ideal for wood and asphalt-tile floors . . . excellent for washing painted surfaces, waxed floors (4 ozs. per gallon for dewaxing floors). No films, no harm to the skin with all-soluble F-100!



Largest manufacturers of specialized cleaning products for business and industry

DETERGENT

Mildly abrasive WYANDOTTE DETERGENT is especially effective on marble, porcelain, mosaic and tile. With scrubbing machines, DETERGENT means real savings . . . often more than pays for itself through brush savings alone! DETERGENT contains CARBOSE*, WYANDOTTE's amazing sodium CMC, which ups cleaning power 50% to 80%. If your choice is a mildly abrasive cleaner, try DETERGENT!

For these products call in your WYANDOTTE representative or supplier. Also, he'll show you non-slipping WYANDOTTE WAX and other fine products for maintenance cleaning. *Wyandotte Chemicals, Wyandotte, Michigan.* *Reg. U.S. Pat. Off.



Wyandotte
CHEMICALS

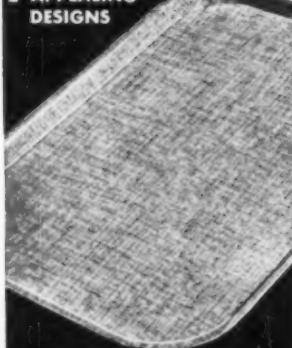
*Helpful service representatives in 138 cities
in the United States and Canada.*

NEWS

Si Lite
presents
a new line of
**COLOR
TRAYS**

Now, Silite gives you beautiful, sparkling color! And never before have color trays been offered at such a low price! Like all Silite products, these new color trays are precision-made to withstand the hardest usage. They're durable, attractive, economical!

**2 APPEALING
DESIGNS**



**6 BEAUTIFUL
COLORS**

See how eye-appealing Silite colors complement any decor! Silite color trays are the quick, economical way to dress up any commercial food service. You are invited to make inquiries.

Silite also offers you a complete line of standard "Tu-Tone" trays, a great value!



Si Lite

2525 WEST 18TH STREET
CHICAGO, ILLINOIS

the appointment of Dwight B. Adams as assistant business manager. Ernest S. Erwin and Seraphim F. Post also are assistant business managers at the university.

Raymond H. Finlay, former dean of students at Sampson College, has been named director of Long Island University's evening division.

Carl E. Glans has been appointed as the first full-time accountant at Upsala College, East Orange, N.J., according to a recent announcement by E. Wimmer Nelson, controller of the college.



Carl E. Glans

CLASSIFIED ADVERTISING

POSITIONS WANTED

Administrative Assistant — College graduate with financial and legal background desires position as an administrative assistant at a university, college or large school; salary open. Write Box CW 85, COLLEGE AND UNIVERSITY BUSINESS.

Administrative Assistant — College graduate; experience; teaching, coaching girls' sports, supervising girls' dormitory, instituting student government; desires administrative position in secondary school or college; salary open. Write to Box CW 119, COLLEGE AND UNIVERSITY BUSINESS.

Administrator — With twenty years experience in college business and academic administration; now located in large eastern city; for personal reasons desires to move to institution in smaller community in New England, Middle Atlantic or North Central state; his education and experience fit this man to serve as business manager, comptroller, administrative dean or assistant to the president of college or private school; salary open. Write Box CW 117, COLLEGE AND UNIVERSITY BUSINESS.

Business Manager — Harvard MBA; age 34; assistant professor of accounting and finance in liberal-arts college, desires eastern location; will consider assistant position in large institution; industrial and hotel experience. Write Box CW 129, COLLEGE AND UNIVERSITY BUSINESS for resume.

Purchasing Agent — Superintendent of Buildings and Grounds — **Business Manager** — 5 years experience in small eastern college; age 33, B.S. Degree in Business Administration; available now; prefer Northeast area. Write Box CW 118, COLLEGE AND UNIVERSITY BUSINESS.

Plant Maintenance Superintendent — Professional engineer; 14 years supervising engineer, metropolitan utility plant maintenance; 3 years engineer officer (Lt. Cmdr.) aircraft carrier; 6 years general manager, importing and manufacturing corporation; age 50; energetic, dependable; health excellent; pension unimportant; prepared supervise all custodial, plant operations at maximum efficiency, minimum cost; wife former teacher; library and welfare experience; available part-time if needed; not required. Write Box CW 121, COLLEGE AND UNIVERSITY BUSINESS.

POSITIONS OPEN

Dormitory Manager — California; Dietetics or Home Economics Major required; send full information regarding education, experience and salary. Write Box CO 99, COLLEGE AND UNIVERSITY BUSINESS.

Salesman — Established firm in college, university, and contract food furniture business seeking man to sell its products for dormitories, dining rooms and lounges; territory — Central States. Kindly submit complete qualifications to: Box CO 97, COLLEGE AND UNIVERSITY BUSINESS.

Plant Superintendent — Small New England liberal arts college for men; experience in building maintenance and repair, working engineering knowledge, ability to follow blueprints and direct staff and contractors; good opportunity for one who desires to live in small city; write qualifications and experience. Write Box CO 98, COLLEGE AND UNIVERSITY BUSINESS.

Plant Superintendent — New York metropolitan college; Mechanical Engineering Degree required; experience in building construction and maintenance; send complete resume of training and professional experience, personal data, and salary expected. Write Box CO 96, COLLEGE AND UNIVERSITY BUSINESS.

Superintendent of Buildings and Grounds — Medium sized midwest university seeking qualified applicants; qualifications: College degree in Engineering; minimum 5 years supervisory experience in building maintenance and maintenance crafts; write full particulars as to experience, education, references, and age. Write Box CO 100, COLLEGE AND UNIVERSITY BUSINESS.

Superintendent of Buildings and Grounds — In New England College of 1200 enrollment to manage central steam plant, 80 campus buildings and houses, extensive grounds, and maintenance staff of un-unionized skilled and unskilled workers. Write Box CO 101, COLLEGE AND UNIVERSITY BUSINESS.

FOR SALE

338 units Heywood-Wakefield non-portable school auditorium furniture suitable for auditorium with sloping floor. Excellent condition. Apply to Superintendent of Schools, NORTH SMITHFIELD SCHOOL DEPARTMENT, P.O. Staterville, R.I.

The rates for classified advertisements are: 10 cents a word; minimum charge, \$2.50.

Forms close 25th of month preceding date of issue.

Address replies to
COLLEGE AND UNIVERSITY BUSINESS
919 N. Michigan Avenue, Chicago 11, Ill.

COLLEGE and UNIVERSITY BUSINESS



Music Room, Central Washington College, Ellensburg, Washington



Unlike many college music rooms, this one lets you hear every note pure and clear, every word sharp and distinct . . . undistorted by distracting echoes and noise. The secret? Good acoustics created by Acousti-Celotex Sound Conditioning!

A sound-absorbing ceiling of Acousti-Celotex Tile checks excessive reverberation, corrects faulty acoustics, makes good hearing easy in music rooms, auditoriums, classrooms. In study halls, libraries, gyms, cafeterias and corridors—it muffles disturbing noise, brings relaxing quiet that helps students and instructors alike to do better work with less strain, less fatigue.

Sound Conditioning is a Sound Investment...

Acousti-Celotex Tile is quickly installed at moderate cost. Needs no special maintenance. Two coats of tough finish, bonded under pressure of a hot knurling iron, give it a surface of superior washability. Can be washed repeatedly and painted repeatedly without impairing its sound-absorbing efficiency.

GET A FREE ANALYSIS of the acoustical and noise problems in your school without obligation. Write now for the name of your local distributor of Acousti-Celotex products. You will also receive a free booklet, "Sound Conditioning for Schools and Colleges." The Celotex Corporation, Dept. T-112, 120 S. La Salle St., Chicago 3, Ill. In Canada, Dominion Sound Equipments, Ltd., Montreal, Que.



ACOUSTI-CELOTEX
TRADE MARK REGISTERED U. S. PAT. OFF.
Sound Conditioning

PRODUCTS FOR EVERY SOUND CONDITIONING PROBLEM

THE CELOTEX CORPORATION, 120 S. LA SALLE ST., CHICAGO 3, ILLINOIS



STUDENTS WANT FULLY SATISFYING SHOWER BATHING

This all students know: that fatigue from work or play *can* be washed away and the feeling of fitness restored IF the shower is *completely* satisfying. To measure up to their wants the SHOWER HEAD must deliver a full spray, evenly distributed in an undistorted pattern, and directed as desired.

Management Wants Refreshed Students and MONEY SAVINGS

—BOTH ARE THE CONTRIBUTIONS OF

THE NEW SLOAN

Act-O-Matic SHOWER HEAD

In this revolutionary new shower head you get the Desired Dozen Features:

- 1 **Self-cleaning.** Patented automatic action thoroughly flushes the interior of shower head with each use.
- 2 **No clogging.** All clogging particles are automatically and completely discharged.
- 3 **Simple, reliable, long-lasting.** Only one moving part inside the solid brass, high chrome finished housing.
- 4 **Greatly improved spray pattern.** Cone-within-cone spray gives an evenly distributed shower.
- 5 **Fingertip volume control.** Foolproof volume control increases or decreases rate of water flow to suit bather.
- 6 **Spray direction adjustable.** Never-leak ball joint enables bather to direct spray as desired.
- 7 **No dripping.** New design principle prevents dripping after shower has been turned off.
- 8 **Water economy.** Exclusive design provides efficient bathing with big water savings.
- 9 **Fuel savings.** It costs money to heat and pump water; thus water economy means saving of costly fuel.
- 10 **Maintenance eliminated.** Since this shower head is always free from clogging and other faults it requires no servicing.
- 11 **Easily, quickly installed.** Equipped with connector that fits all standard shower arms on old or new installations.
- 12 **Vandal-proof model.** To prevent tampering or theft, a vandal-proof model is available at slight additional cost.

Write for illustrated folder containing diagrammatic view and full information on the unique New SLOAN Act-O-Matic SHOWER HEAD.

SLOAN VALVE COMPANY

4300 WEST LAKE STREET • CHICAGO 24 • ILLINOIS

Makers since 1906 of Flush Valves which are in world-wide use—in buildings of every type and on ships at sea. More Sloan Flush Valves are sold than all other makes combined.



This Shower Head is
AUTOMATICALLY
SELF-CLEANING
Each Time
it's Used

WHAT'S NEW

November 1952

Edited by Bessie Covert

TO HELP you get more information quickly on the new products described in this section, we have provided the postage paid card opposite page 92. Circle the key numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. COLLEGE and UNIVERSITY BUSINESS will send your requests to the manufacturers. If you wish other product information, just write us and we shall make every effort to supply it.

Compact Photo-Copy Machine

Any record or form up to 14 inches wide, in any length, can be copied exactly with the new Copyfix photo copy machine. Exact copies can be made in less than a minute without developing, washing, fixing or drying, regardless of



type or color of original. The extremely small, light, compact machine takes up not much more desk space than dictating equipment. No special installation is required as the machine operates through any electrical outlet. Remington Rand Inc., Dept. CUB, 315 Fourth Ave., New York 10. (Key No. 329)

"Jiffy" Screen

Designed for use on tables or desks, the new Radiant "Jiffy" screen is portable and lightweight. It is a carefully engineered compact unit that is equipped with a convenient hanger for use as a wall screen if desired. Radiant's new Perma-White Matte Surface, which will not peel, crack or rot and is guaranteed by the manufacturer to stay white, is a feature of the new screen. The screen is equipped with a collapsible supporting arm which makes opening and closing quick and simple. The feet are rubber tipped to protect table finishes and can be swiveled to a horizontal position when the screen is used on the wall. Radiant Manufacturing Corp., Dept. CUB, 2627 W. Roosevelt Road, Chicago 8. (Key No. 330)

Synthetic Coating

Pozcote is a new corrosion-resistant synthetic coating for wood, masonry and metal surfaces. It is impervious to water, acids, alkalis, alcohol, syrups, oils and greases. It can be used indoors or out

and is tough and long wearing. It does not crack or peel from temperature changes and stands up as a floor coating under heavy traffic. Pozcote is available in black, aluminum, clear, white and a complete assortment of colors. The Monroe Co., Inc., Dept. CUB, 10703 Quebec Ave., Cleveland 6, Ohio. (Key No. 331)

Mimeograph Stencil Sheet

Available in four sizes, the new A. B. Dick orange colored multi-purpose mimeograph stencil sheet assembly can be had in legal and letter sizes, with or without satin finish film-topping. They give top quality copies with long runs on the mimeograph with quick drying inks such as Dick's Contac-Dri and exceptionally long runs with more commonly used oil base inks. The orange color of the stencil provides high visibility while the stencil is in the typewriter and when it is used on the Mimescope illuminated drawing board.

The assembly features a new black cushion sheet. The glossy jet black plastic coating eliminates the need for burining errors, thus simplifying the making of corrections. The reverse side coating produces a proof copy on the backing sheet for easy proof reading. The new stencils are designed for use in the offset process when used as negatives for producing photographic plates. A. B. Dick Co., Dept. CUB, 5700 W. Touhy, Chicago 31. (Key No. 332)

Recording Potentiometer

The new Weston Recording Potentiometer is designed to set new standards for both mechanical and electrical design simplicity and to provide many operating advantages. The simplified chart frame swings out full 180 degrees on straight pivots with the chart always remaining in time sequence. Changing chart speeds and changing ranges also have been greatly simplified by the new design features. The newly designed pen operates more efficiently and requires no priming after initial starting. The case of the new unit is small and readily adaptable to standard radio racks. All servicing and inspection can be made from the front of the instrument. Weston Electrical Instrument Corp., Dept. CUB, Newark 5, N.J. (Key No. 333)

(Continued on page 84)

DuPont Sealer-Coater

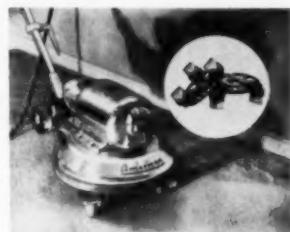
DuPont's new sealer-coater is designed to reduce maintenance costs and permit two-coat-a-day painting. The sealer dries so promptly that an average sized room can be painted continuously until the job is done, the topcoat being applied as soon as the sealer coat is completed. This reduces the time areas are out of service for painting.

The DuPont Sealer-Coater is designed for application to plaster, old painted surfaces or wallboard and is also suitable over interior masonry as well as wallpaper and water-mixed paints. It can be applied by brush, spray or roller-coater. The new primer-sealer fills fine cracks and is remarkably free from odor. E. I. du Pont de Nemours & Co., Dept. CUB, Wilmington, Del. (Key No. 334)

Grinding Attachment

A new grinding attachment has been developed which quickly converts the all-purpose American Deluxe floor maintenance machine to a powerful and efficient portable floor grinder. The grinding attachment is designed with three carbondium grinding stones which are equally spaced and fastened to rotate individually on precision built planetary discs which are part of a rugged cast iron frame. The grinder can be used to refinish, grind, polish or resurface terrazzo floors and is speedy and efficient for smoothing out rough, uneven concrete or brick surfaces.

The grinding attachment can be put on or taken off in seconds, without the



use of tools. Several grits are available and the attachment can be used on the 15, 16 and 17 inch machines. American Floor Surfacing Machine Co., Dept. CUB, 518 S. St. Clair St., Toledo 3, Ohio. (Key No. 335)

What's New . . .

Luminous-Indirect Luminaire

The McKinley is a new 4 foot luminous-indirect luminaire particularly adapted for use in classrooms, offices, art rooms and other areas requiring a unit of low surface brightness. It is wide



and shallow and the combined side and bottom panels are of white, ribbed polystyrene, reinforced by a narrow longitudinal strip. It gives high reflectivity and low surface brightness and blends with the ceiling when lighted. It is available in 4 foot units, 16 5/16 inches wide and 4 inches deep. Units are pendant mounted with Pittsburgh "H" Series hangers which include end, junction and clevis hangers. Hangers grip the unit at any point along the raceway, allowing flexibility of installation to avoid beams and pipes. **Pittsburgh Reflector Co., Dept. CUB, 419 Oliver Bldg., Pittsburgh 22, Pa.** (Key No. 336)

Vitalator Oxygen Unit

A portable apparatus for administering oxygen to athletes to help them regain their strength more quickly after physical exertion is introduced in the Vitalator. Consisting of an oxygen cylinder and regulator connected with a half-mask rubber facepiece by a six foot length of wire-reinforced, kinkproof rubber hose, the unit is simple to operate. The user merely puts the facepiece over his nose and mouth, turns a valve on the cylinder and breathes. There are no other controls. The unit adjusts automatically to any breathing pattern.

While oxygen is not a stimulant, it helps the heart and respiratory system return to normal 30 per cent faster than when breathing ordinary air. Oxygen reduces the overload on the heart and lungs. Heart of the Vitalator is the MSA Oxygen Therapy Unit which has been accepted by the Council on Physical Medicine and Rehabilitation of the American Medical Association. **Mine Safety Appliances Co., Dept. CUB, Pittsburgh 8, Pa.** (Key No. 337)

Power Roller

The new Con-Sol power roller is available in two models: a lawn roller and an all-purpose roller, each with

weight adjustable for need. The all-purpose roller carries a sprinkler tank used to wet the rollers to reduce sticking of paving materials. The units are low in cost and in operation and are powered by a 2 1/2 h.p. engine. A manually set governor maintains speed up and down grades. Operation is simple and controls are grouped on the handle bar. **Consolidated Industries, Inc., Dept. CUB, W. Cheshire, Conn.** (Key No. 338)

Uni-Flow Fluorescent Lighting

The new line of recessed Mitchell Uni-Flow Troffers offers a selection of 2442 different lighting combinations and is the result of two years of design and engineering. It offers a complete new system of matching troffers in every useful length for every type of ceiling. The new Uni-Flow Troffer can be specified before, during or after building designs have been completed without making changes in specifications for hanging. It offers unlimited application with basic open-type units available in two-foot, four-foot, five-foot, six-foot, eight-foot and ten-foot lengths, either shallow or deep, with or without flange.

A complete choice of shielding equipment is offered in the lengths listed including a metal louvre, a plastic louvre, Alba-lite, prismatic glass, Unilens, Twin lens, Curved lens, Fota light, longitudinal shields for two-lamp units and crosswise baffles for deep units. The new Troffers are available with one, two or three lamps except the five and ten foot units which use one or two lamps standard or four-lamp tandem. Reflectors and lamp types are universal. Special hangers make installation simple and shorten installation time. **Mitchell Mfg. Co., Dept. CUB, 2525 N. Clybourn Ave., Chicago 14.** (Key No. 339)

Hydramizer for Water Tests

The Hydramizer offers a true method of signalling the end of a zeolite softener run. Employing the soap test method, the Hydramizer samples the water periodically and tests it for hardness. If the water is hard a red light appears. If it is still soft a green light glows. For automatic softeners it actuates the automatic valves and for selective automatic or manual units a bell rings to warn the operator that regeneration is necessary.

The unit is economical in cost and in maintenance. The soap container is filled occasionally but no other routine maintenance is necessary. It is a small, compact unit which requires a minimum of space and can be placed on a stand or shelf in the vicinity of the softener. **Refinite Corp., Dept. CUB, Box 1312, Omaha, Neb.** (Key No. 340)

(Continued on page 86)

Steel Folding Leg

Folding tables can be easily made with a new steel folding leg recently introduced. It is easily screwed to plywood, masonite, wood or other materials to make tables of any size or height which fold for easy storage. Tables may be used permanently or quickly dismantled for other use.

Constructed of bright-plated, 1 inch 16 gauge electrically welded steel tubing, Atlas Folding Legs are designed to give plenty of leg room at the table. They will support a load of 1500 pounds and lock into position when opened. **All-Luminum Products, Dept. CUB, 1917 W. Oxford St., Philadelphia 21, Pa.** (Key No. 341)

Modular Multi-Vent

A new type of ceiling air diffusing panel, the Modular Multi-Vent, is designed for heating, cooling and ventilating systems using either duct or plenum air supply. The new diffuser is designed to reduce the cost of installing an air distribution system in acoustical metal pan ceilings. It can be incorporated into metal pan ceilings at minimum cost, delivers conditioned air at low velocities and accomplishes over-all air distribution by pressure displacement. Its operation permits locating the panels anywhere in the ceiling to meet load conditions. The panels are completely concealed by standard perforated metal ceiling pans and do not interfere with lighting fixtures or interior design details. Multi-Vent maintains excellent uniformity of room temperatures, can handle large volume of air in proportion to room size and still maintain ideal comfort zone conditions.

The Modular Multi-Vent is a simple assembly which is quickly and easily



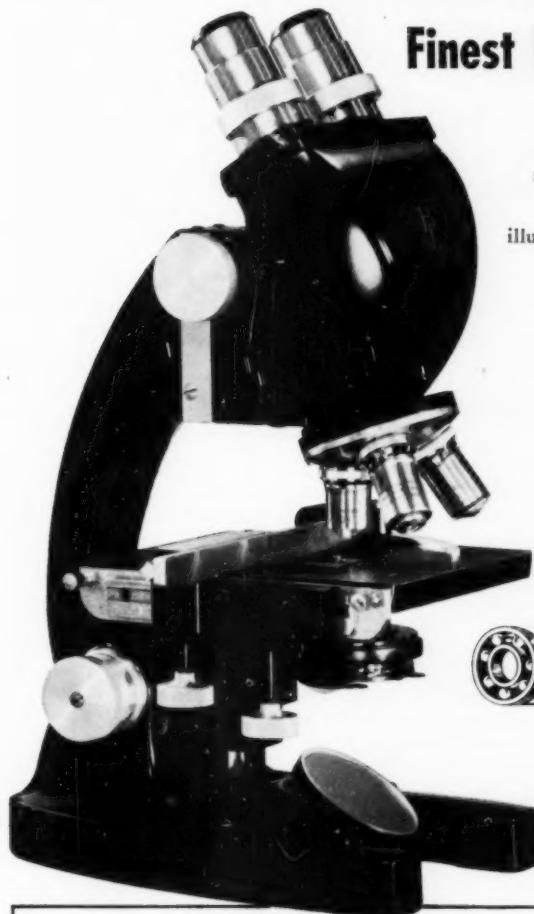
installed. It is therefore readily and economically incorporated into existing acoustical metal pan ceilings as well as into new buildings. **The Pyle-National Co., Dept. CUB, 1334 N. Kostner Ave., Chicago 51.** (Key No. 342)

Comfort Wins HANDS DOWN

... with the World's



Finest Laboratory Microscope



Your hand is *completely at rest* on the table for relaxed operation of fine adjustment, mechanical stage and substage condenser controls, and illuminator switch. *They're all within effortless reach!*

You remain fatigue-free, for more thorough examinations. And you'll appreciate the smooth, frictionless Dynoptic focusing motion. Start enjoying the many exclusive advantages of the *world's finest laboratory microscope*.

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Write for FREE DEMONSTRATION and LITERATURE.
See for yourself how Bausch & Lomb Dynoptic Microscopes
out-perform any laboratory microscope ever made. Bausch
& Lomb Optical Co., 7671 St. Paul St., Rochester 2, N. Y.



What's New . . .

Metering Faucet

Improved operating performance and water economy are advantages claimed for the new Speakman Metering Lavatory Faucet. The new S-4320 Model 52 is a specially designed push-button type



faucet that meters water accurately. It is non-hammering, non-dripping and non-clogging. A specially designed monel screen prevents dirt, chips, scale, solder or pipe joint cement from passing through the faucet. Thus damage to seat, seat washer and Neoprene cup washer is prevented. A minimum of time is required to remove and renew the operating unit. The new faucet is designed for use in schools and other institutions where water saving is a factor. **Speakman Company, Dept. CUB, Wilmington 99, Del.** (Key No. 343)

Portion Scale

Advanced design for speed and accuracy in weighing portions in food service is offered in the new Model 3011 Speed-weight Portion Scale. The scale is modern throughout in appearance and construction and offers a choice of either front or side indication. An acrylic plastic dome on the chart housing admits light from both sides and top, eliminating chart shadows and making accurate reading easy. The specially designed charts have red figures on a white background and all charts have indication on both sides. The indicator travels one full inch to each ounce and the scale is easily portable and ready for use anywhere. **Toledo Scale Co., Dept. CUB, 1023 Telegraph Rd., Toledo 12, Ohio.** (Key No. 344)

Automatic Ice Maker

The new Carrier Cub automatic ice maker will make 200 pounds of cubes or crushed ice daily. This smaller capacity machine fits into limited space requirements and produces only the amount of ice needed, shutting off automatically when the storage bin is full. It is available in a combination model with a

factory built crusher for production of either cubes or crushed ice at a turn of a knob. This type has a divided storage bin with the machine automatically depositing cubes in one section and crushed ice in the other. Three grades of crushed ice from fine to coarse are available through a turn of a knob.

The smaller machine is available in three sizes with storage bins of 100, 160 or 240 pound capacity. It is suited to utility room or floor kitchen installation to save transporting ice from a central area. **Carrier Corporation, Dept. CUB, Syracuse 1, N.Y.** (Key No. 345)

cally controlled expansion valve and uniform temperature is maintained throughout the cooler.

Two models, 22 case and 30 case sizes, are available, both with frame construction in solid redwood and interior of heavy, galvanized iron with bottom drain to simplify cleaning. The slide-up type doors are full opening and easily removable. **Uni-Fridge Corp., Dept. CUB, 712 Fifth Ave., N., Minneapolis 5, Minn.** (Key No. 348)

Heat-Absorbing Glass

Pennvernon Solex is a flat drawn sheet glass with the functional heat-absorbing, glare-reducing characteristics of Solex. It is a greenish tint heavy flat drawn glass in 7/32 inch thickness manufactured to reduce the intensity of solar radiation without sacrificing the light transmission characteristics of high quality glass. It reduces interior heat of rooms with windows in direct sunlight and the pleasant greenish tint softens light intensity and reduces glare. **Pittsburgh Plate Glass Co., Dept. CUB, 632 Duquesne Way, Pittsburgh 22, Pa.** (Key No. 349)

Bulk Milk Dispenser

The new Monitor 20 quart single self-refrigerated stainless steel bulk milk dispenser provides facilities for the sanitary dispensing of bulk milk. As in Monitor dispensers of other sizes, the new unit features the Monitor stainless steel "tube-faucet" which is sealed inside the milk can at the dairy, assuring against the possibility of contamination of the milk in the dispenser.

The dispenser accommodates the standard sized milk can and has ample space below the dispenser faucet for glasses or standard sized milk shake containers. The positive shut-off action

Slide Cover Glasses

Microscope slide cover glasses of finest optical quality are now being made in America. The cover glasses are of uniform thickness and quality, are water white crystal in color and offer a high degree of flatness. They meet government specifications and are produced in the two standard thickness ranges, in small squares, rectangles and circles. They are made from ribbon glass manufactured by Corning Glass Works and are cut and marketed by Alfred Bicknell Associates, Inc., Dept. CUB, Cambridge 39, Mass. (Key No. 347)

Beverage Cooler

The new Uni-Fridge beverage cooler is designed to fit easily into any standard counter arrangement. It is completely self-contained and is placed in operation by plugging into a 110 volt outlet. Cooling is regulated by a thermostati-

prevents milk from dripping and the force of the milk flow is controlled to prevent splash. The dispensers are made of stainless steel and are self-refrigerated. **Monitor Process Corp., Dept. CUB, Jersey City 2, N. J.** (Key No. 350)

(Continued on page 88)



Formula for optimum lighting efficiency:

Quality + Cleanability = the Wakefield STAR



Making Light Work of It with Wakefield Maintenance Equipment

By using this blow-type Wakefield maintenance equipment, the janitor can keep Stars clean by spending five minutes a day once every three weeks in each room. For yearly washing of reflectors, lamps and channels, the janitor removes the reflector (they slide in and out like a drawer) and uses an ordinary detergent.

Note: the Wakefield maintenance equipment shown is available free to purchasers of Stars in specified quantities. We will gladly give you details.

There are good reasons why the Star is recognized as a superior classroom luminaire and why it is so often recommended for "Co-ordinated Classrooms" (as well as offices, drafting rooms and other areas where critical seeing tasks are performed).

QUALITY OF LIGHT. Luminous Plaskon reflector sends most of the light to the ceiling, to be distributed evenly all over the room. Result: a minimum of reflected glare. The reflector, which completely hides the lamps, has about the same brightness as the ceiling. Result: a minimum of direct glare.

CLEANABILITY. The Star is one of the most easily and completely cleanable of luminaires. See column at left.

RECENT TESTS of actual installations, using the interreflection method, indicate fewer Stars are required to light a room at a given level than had previously been thought necessary. We will be glad to send you the new coefficient of utilization tables.

The Star is equipped for pre-heat and rapid-start bipin and slimline lamps. See American School & University. Or write to The F. W. Wakefield Brass Company, Vermilion, Ohio.

Pierce School
West Newton, Mass.
Room size: 23' x 36'
2 rows of four 4' units
2-75 W standard warm white
fluorescent lamps per unit.
Footcandles: 32 average.

Wakefield Over-ALL Lighting



THE GRENADIER



THE PACEMAKER



THE COMMODORE



THE STAR



THE WAKEFIELD CEILING

What's New . . .

Kent K-13 Floor Machine



The new Kent K-13 Floor Machine has a single 13 inch diameter brush and both "Balanced Power" and "Floating Power," two Kent features. Kent "Floating Power" reduces the strain on moving parts. Two ball bearings support the armature. Two amply large tapered roller bearings in the base support the entire weight of the new machine. "Balanced Power" assures ease of operation and less fatigue for the operator while exerting 80 pounds pressure on the floor through the brush surface. The adjustable height handle has an automatic safety switch operated by either or both hands.

The K-13 performs all floor maintenance functions, including scrubbing, polishing, buffing and steel wooling. It has a minimum of moving parts, is positive gear-driven, and has only two gears, both running in a continuous bath of grease. Kent Company, Inc., Dept. CUB, Rome, N. Y. (Key No. 351)

Aluminum Builders' Hardware

Pressure-cast aluminum is now being used for five items of builders' hardware made by P. & F. Corbin. Included are a door stop, sash fastener, coat and hat hook, bar sash lift and hand rail bracket. The items are strong and durable, though light, and are rustproof and attractively styled. They are economical in cost and are supplied in satin aluminum or ball-burnished brass finish. P. & F. Corbin Division, The American Hardware Corp., Dept. CUB, New Britain, Conn. (Key No. 352)

Granite Gray Range Finish

Garland restaurant ranges are now available in a new silicone base finish known as Granite Gray. The new gray finish is attractive in appearance and highly practical since it is easy to clean and to keep clean.

Other improvements in the Garland commercial kitchen range line include a new high shelf with built-in flue and top vent, a one-piece stainless steel shelf plate and one-piece side panels with rounded edges. A specially designed heavy duty oven heat control is another

feature as are sturdier legs with a new adjustable height feature. The new line is available, in addition to the new Granite Gray, in Black Japan and stainless steel. Detroit-Michigan Stove Co., Dept. CUB, 6950 E. Jefferson Ave., Detroit 31, Mich. (Key No. 353)

panel open, the hopper is automatically refilled as the coal is withdrawn. A rubber tired truck is available for conveying the tub from the coal pile to the point where the track starts when the ceiling is too low for the use of a track. The Ney Manufacturing Co., Dept. CUB, Canton, Ohio. (Key No. 355)

Projection Table

Wherever audio-visual equipment is used, the Model 75-A Roll-A-Lock Table will prove practical for holding or moving a projector. The table is ruggedly built for years of hard usage without maintenance, yet is light and easy to move. The projector rests on the top of the table and the amplifier or other equipment can be placed on the lower shelf. The stand can also be used as a rolling utility table for other than projector use.



The table has a plastic top welded to plywood with aluminum trim. It is equipped with 4 inch quiet-running rubber tired wheels with automatic locks on two of the wheels for firmness. It is large enough for projector needs yet small enough to roll easily between classroom desks. It has extra strong aluminum legs and the table stands 39 inches high. Commercial Picture Equipment, Inc., Dept. CUB, 1567 W. Homer St., Chicago 22. (Key No. 354)

Coal Conveyor

The delivery of coal to stokers in schools, hospitals and other institutions is simplified by use of a new coal conveyor recently introduced. A galvanized steel "tub" that holds approximately 800 pounds of stoker coal is designed for easy lifting to an overhead double angle steel track extending from the coal pile to the stoker. For use where the overhead track cannot be suspended from the ceiling, the track can be supported from arches set in the floor.

The coal is fed by gravity directly into the hopper of the stoker. In this way the loaded tub increases the storage capacity of the stoker hopper for by leaving the

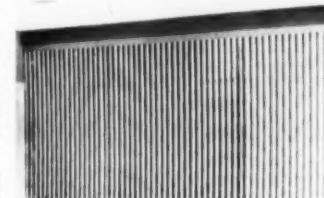
Potato Peeler

The floor model Peelmaster Electric Potato Peeler has been redesigned with heavy aluminum legs set up higher for easy cleaning underneath. A new type door with extra large chute, new top for easy loading and new interior with sharp slope at the bottom to wash waste into drains are other improvements. The new machine is 38 inches high and has a capacity of 20 to 22 pounds per minute. Service Appliance Co., Dept. CUB, 1775 Broadway, New York 19. (Key No. 356)

Vertical Blinds

New and different types of fabrics are used in the new Vertical Blinds. The blinds allow complete entry of light into the classroom when fully rotated to open position. When closed, the blinds with the new fabrics emit all light from the classroom when used for film or slide projection. A colorfast, sunproof and waterproof Vertical Blinds fabric has been perfected by Du Pont which offers a translucent, smooth surface. Fabrics are also available with one color on one side and a second color on the reverse. Other fabrics manufactured by Celanese Corporation are also used in Vertical Blinds and give a range of over fifty colors in three different fabrics.

Vertical Blinds can be used on any type window, including skylights. The cornice boxes and all metal fittings are designed for permanent installation and complete fabric replacement can be made as desired. The vertical louvers collect a minimum of dust and are easily maintained. When soiled, louvers can be cleaned by rinsing. The blinds are controlled by a finger-tip latch to permit



varying degrees of light and air. Vertical Blinds Corp. of America, Dept. CUB, 1936 Pontius Ave., West Los Angeles 25, Calif. (Key No. 357)

**HERRICK . . . THE
"PLUS-REFRIGERATOR" WITH
STAINLESS STEEL
EXTERIOR AND INTERIOR**



**Assures You
COMPLETE
FOOD
CONDITIONING**

Thorough air purification . . . gentle yet positive circulation . . . correct humidity and controlled temperature mean fresher, more flavorful food. These are all important "plus-features" of every HERRICK refrigerator. To assure you easy, carefree sanitation, HERRICK refrigerators are finished, *inside and out*, with wear-proof stainless steel. Write for full information.

**HERRICK REFRIGERATOR CO. • WATERLOO, IOWA
DEPT. C. COMMERCIAL REFRIGERATION DIVISION**

HERRICK *The Master of Refrigeration*



**American
Folding Chairs
NEW
IMPROVED
DESIGN!**

BEST FOR EVERY FOLDING CHAIR PURPOSE!

- DURABLE—strong steel frame, reinforced
- SAFE—no tipping, pinching, snagging hazards
- COMFORTABLE—extra-wide, extra-deep seats and backs
- CONVENIENT—fold quietly, quickly, compactly
- RUBBER SHOES—long-life, replaceable
- SEAT STYLES—formed plywood with durable lacquer finish; or vinyl-plastic upholstered

OVER EIGHT MILLION IN USE!

WRITE FOR
DESCRIPTIONS
AND PRICES

American Seating Company

Grand Rapids 2, Michigan

Branch Offices and Distributors in Principal Cities

NEW LIFE Library Furniture

is timeless because its sectional design meets current library needs and provides for the future.

NEW LIFE can be installed in a number of combinations using stock units which can be added to as conditions require.

Illustrated above is one of many functional assemblies represented in NEW LIFE with units identified below.

Write for Catalog L-50 and get full details.

- a** Cornice Unit
- b** Five-drawer Unit
- c** Reference Shelf
- d** Fifteen-drawer Unit
- e** Low Base

JOHN E. SJÖSTRÖM COMPANY

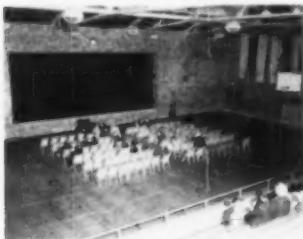
1717 N. TENTH ST., PHILADELPHIA 22, PA.

Established 1893

What's New . . .

Cotton Duck Floor Cover

The ABC Gym Floor Cover is a durable cotton duck floor covering designed to protect gymnasium floors when the gymnasium is used as an auditorium.



Comparatively light in weight, it is tough, resistant to scuffing of feet and folding chairs, and easy to keep clean. It is neutral in color and harmonizes with any interior treatment.

The floor cover is laid in sections with 2 inch overlap where sections join. Four widths or sections were used to cover the floor illustrated. Two men roll up a section at a time until all four widths are rolled against the wall. This can be done in five minutes. The covering can be folded for storing in a closet if desired. Use of the floor cover preserves the finish on the floor and prevents marks and stains. **American Brattice Cloth Corp., Dept. CUB, Warsaw, Ind. (Key No. 358)**

Masonry Coating

A new one-coat Masonry Paint is introduced as Mason-Coat No. 310. It is an oil base paint designed for protection against moisture infiltration while furnishing a decorative finish. It is applicable to both interior and exterior surfaces of concrete block, cement, brick, stucco, asbestos, cement siding and similar masonry surfaces. It may be applied by brush or spray over new masonry or previously painted surfaces and is available in white and several attractive tints. **United Laboratories, Inc., Dept. CUB, 16801 Euclid Ave., Cleveland 12, Ohio. (Key No. 359)**

Athletic Socks

Athletic socks with distinctive markings that students cannot remove or cover are now available. This permits the school to provide freshly laundered and sterilized socks to students for gymnasium classes or sports, thus reducing foot health problems caused by students bringing their own socks not freshly laundered.

Known as "Big 10," the socks are white with a distinctive black band around the ankle, low enough to show below trouser cuffs. Thus socks are

seldom missing since students cannot wear them openly outside of the games without detection. In addition, the socks are permanently marked for size by a fast-color yarn knit into each toe, a special color for each size, thus permitting rapid assembling of pairs after laundering. **Ripon Knitting Works, Dept. CUB, Ripon, Wis. (Key No. 360)**

Windsor Stainless Dinner Ware

Designed especially for institutional use, Windsor Stainless dinner ware is now being added to the Oneida Stainless heavy weight line of dinner ware. The new line is limited to the four essential pieces: teaspoon, dessert spoon, utility fork and one piece utility knife. The teaspoon, dessert spoon and utility fork are manufactured to Canadian government specifications while the ASM utility knife is made according to our Federal specifications. The line is designed for heavy use and long wear. **Oneida Ltd., Hotel and Restaurant Div., Dept. CUB, Oneida, N. Y. (Key No. 361)**

Electronic Rectifier

The R-P-3 Science Panel is designed expressly for educational use in physics and science laboratories of secondary schools and colleges. It is a selenium rectifier for use in connection with electronic developments and a switch enables it to offer alternating or direct current as desired. It is housed in a 16 gauge steel cabinet finished in gray hammerloid, 17½ inches high, 12 inches wide and 7½ inches deep. **The Electronic Rectifier Co., Dept. CUB, 1462 E. Main St., Rochester 9, N.Y. (Key No. 362)**

Drapery Tape and Hooks

A new type of drapery hook with its own heading tape is now available to simplify the making of window draperies that hang straight. The Easypleat tape has stitched pockets into which the hooks slide. It provides the necessary stiffening for the drapery heading and has only to be sewn to the top of the fabric. The Easypleat hook has prongs which slide into the stitched pockets of the tape to make perfectly placed pleats. It pleats the fabric and holds it to the curtain or drapery rod.

A looped hook at the center goes over the rod for stationary draperies or into the traverse track slides for draw draperies. No measuring or sewing is necessary in making the pleats, and hooks are quickly removed for cleaning or laundering, leaving the fabric flat for easy handling. **Kirsch Drapery Hardware Co., Dept. CUB, Sturgis, Mich. (Key No. 363)**

(Continued on page 92)

Faucet Repair Kit

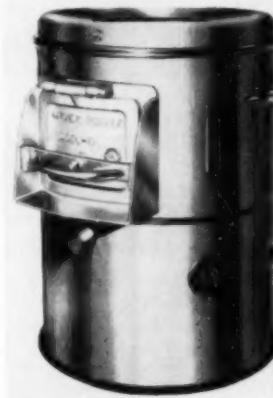
Containing an assortment of 1079 replacement parts, including all sizes of beveled and flat bibb washers, top bibb gaskets, bonnet nut packings and bibb screws, the Sexauer Giant Handy Andy No. 100 is designed to enable the maintenance man to rewasher and repack any leaky faucet quickly and efficiently. A 10-24 tap and handle make it easy to replace rotted or corroded bibb screws.

The parts are assembled in a specially designed metal carrying case with a compartment for each item. The carrying case has a handle and the lid locks tightly to ensure each part remaining in its compartment. An index of the parts and sizes contained is inside the cover. **J. A. Sexauer Mfg. Co., Inc., Dept. CUB, 2503 Third Ave., New York 51. (Key No. 364)**

Vegetable Peeler

Twenty pounds of potatoes or other deep rooted vegetables can be peeled in less than a minute in the new Deluxe Model D Univex Vegetable Peeler. An automatic timer controls the operation and prevents overpeeling. The specially designed peeling disc pulverizes peelings so completely that they flow down any standard drain without clogging.

The peeler is light weight and portable and can be placed on a counter, table, drainboard or on the new Univex Mobile Stand, specially built for portable vegetable peelers. The peeler is ruggedly built of non-rusting stainless steel, is completely enclosed and requires no peel traps. The synchronized gear belt

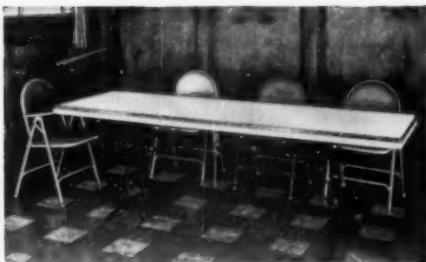


drive assures quiet and smooth operation and the new, improved external grease cup lubrication system provides permanent lubrication to shaft and bearings. **Universal Industries, Dept. CUB, 360 Mystic Ave., Somerville, Mass. (Key No. 365)**

Monroe
FOLDING
TABLES

3 SPECIAL TOPS

5 FINISHES



Write for COLOR PLATE No. 238 Showing
MONROE TABLES with SPECIAL SCHOOL CAFETERIA TOPS

FORMICA

ORNACEL

PLASTICEL

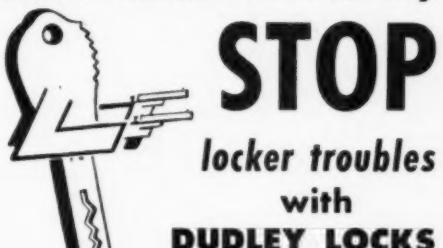
The most popular type and size Monroe Deluxe Folding Pedestal Banquet or School Cafeteria table is our No. 3 (30 x 96 inches), with latest Plasticel top, as low as \$29.90 net in lots of 12 or more. Blan-D or Brown finish. With adjustable height Pedestals, \$32.20 each in lots of 12 or more. Many sizes, types and finishes.

THE Monroe COMPANY

77 CHURCH STREET

COLFAX, IOWA

There's SAFETY in this key



P-570

Master-Keyed
combination
with the SAFE
Dudley Key

RD-2

Rotating dial
combination
with Master-
Chart control

**DUDLEY LOCK
CORPORATION**

DEPT. 1122, CRYSTAL LAKE, ILLINOIS



**MAXIM
SNOW
THROWERS**

REMOVE OR LOAD
SNOW FASTER
AT LOWER COST



7.5 h. p. machine clears 874 sq. ft. per minute

Maxim Snow Throwers eat into the snow and whirl it up to 40 feet away in either direction. Three of the four models may be used for truck loading as well. Over 2,000 in use in 32 states — five years winter-proven in actual use.



48 h. p. machine clears
2,400 sq. ft. per minute.



GET THE FACTS
THE MAXIM SILENCER COMPANY
88 Homestead Ave., Hartford 1, Conn.

Name.....

Address.....

4HT8E

Sanibag Service

Offers Women the BETTER WAY to Dispose of Sanitary Napkins

WOMEN PREFER

the SANIBAG method of disposing of sanitary napkins. Once introduced to Sanibag, they accept it as the quickest, easiest and most discreet disposal method. Discomfort and personal distress can be among the greatest enemies of successful learning.

EASY ON PLUMBING

Sanibags reduce embarrassing toilet stoppages that too often occur in women's lavatories. In fact, Sanibag service costs so little that it pays for itself many times over in reduced plumbing bills and washroom maintenance. Used by hundreds of schools, dormitories and sororities.

Why not investigate the advantages of Sanibag now?

Send for free samples and complete information. When you write, please include your washroom supply merchant's name and address.

**Buy from
Bair & Company**

409 SOUTH GREEN STREET
CHICAGO 7, ILLINOIS

What's New . . .

Product Literature

- Photographs showing the attractive effects obtained by installing Kentile asphalt tile on walls are featured in a new 8 page booklet released by Kentile, Inc., 58 Second Ave., Brooklyn 15, N.Y. Entitled "Kentile As A Wall Covering," the booklet points out the low cost and easy maintenance of asphalt tile wall covering. It gives several case histories of Kentile installations in schools, hospitals and other institutions and stresses its long wear, sanitation and economy of maintenance. Technical aspects of installing Kentile on walls are discussed and architects' specifications as well as a light reflectance chart are included. (Key No. 366)
- "Interior Color Suggestions for Schools" is the title of a booklet published by Devoe & Reynolds Co., Inc., 44th and First Ave., New York 17. Two pages of descriptive text are followed by color charts with paint swatches for ceilings, sidewalls and bases, for three color schemes each for corridors, primary and other classrooms, auditoriums, libraries, lunch rooms, offices, teachers' rooms and gymnasiums. The charts are designed to simplify the problem of specification and maintenance of color in school interiors. (Key No. 367)
- The Kewanee Round "R" Boiler for oil, gas or stoker firing is described and illustrated in the new Catalog No. 92 released by Kewanee-Ross Corp., Kewanee, Ill. Complete information on the quality features of the boiler are given as well as detailed listing of ratings, dimension and trims. (Key No. 368)
- How nine kinds of maintenance work may be done on floors of all kinds, using Hild floor machines with interchangeable attachments, is illustrated and described in a folder recently released by Hild Floor Machine Co., 740 W. Washington Blvd., Chicago 6. The circular explains the operation of the Hild Shower-feed Brush for floor scrubbing and for shampooing rugs and tacked-down carpeting without removing it from the floor. (Key No. 369)
- The Aatell and Jones Holiday Tray Appointment Club has been developed to permit colleges and other institutions to buy tray items, such as place mats, doilies, napkins and similar items, either for individual holidays, in various holiday groups or for a year's holiday requirements. With this system colleges can plan ahead, thus saving time and assuring having the items on hand when the holiday approaches. Shipping costs are also reduced for the group packaged shipments developed by Aatell and Jones, Dept. MH, 3360 Frankford Ave., Philadelphia 34, Pa. (Key No. 370)
- Comprehensive information on the heavy duty synthetic detergent, Arctic Syntex HD, is given in a booklet published by the Technical Service Division of Colgate-Palmolive-Peet Co., 105 Hudson St., Jersey City 2, N.J. What Arctic Syntex HD is, how it is used for laundering and wet cleaning, with formulas for special washing problems, its use in rug and upholstery cleaning and special uses in automatic washers and for general cleaning are some of the subjects covered in this reference booklet. (Key No. 371)
- "The Shades That Last as Long as the Windows" is the title of a folder issued by The Hough Shade Corporation, Janesville, Wis. Descriptive information is given in Bulletin S-309 on the new line of Ra-Tox Ventilating Shades specifically designed for dormitory and other school applications. Made of strong, resilient kiln-dried Basswood slats, woven together with heavy duty seine twine into a rugged, durable fabric, Ra-Tox Ventilating Shades are resistant to rough usage and require a minimum of maintenance. The folder gives complete details on the shades which are available in a wide range of colors or in a natural finish. (Key No. 372)
- All pertinent information on National Art Convector is given in the new 24 page Catalog No. 601 offered by The National Radiator Co., Johnstown, Pa. Fast heating action and modern heating design are incorporated in National Art Convector which are illustrated and described in detail in the catalog. Roughing-in dimensions and installation data for both convector and enclosures are given, as are complete rating tables, piping connection drawings, data on how to select proper size and basic information on the construction and performance of the convector's component parts. (Key No. 373)
- The story of Puritan Floor Seals is told in a new folder recently released by Puritan Chemical Co., 916 Ashby St., N.W., Atlanta, Ga. Each product described has an appropriate accompanying illustration. A how-to-do-it story on the back page illustrates and describes each step required to seal floors with these products. (Key No. 374)
- An informative booklet on rubber floors has been published by the Rubber Manufacturers Association, Inc., 444 Madison Ave., New York 22. Entitled "Facts About Rubber Floors," it tells in words, cartoon type illustrations and charts what rubber flooring is, the trend to rubber flooring, why it is desirable, how it is made, it uses, and how to install and maintain it. It is a non-technical reference book for those concerned with its maintenance. (Key No. 375)
- A technic for use in designing economical automatic electric control installations for heating and air conditioning systems is offered in Bulletin F 5265 issued by Barber-Colman Co., Rockford, Ill. (Key No. 376)
- A new folder on Despatch Commander Ovens has been released by Despatch Oven Co., 619 E. 8th St., Minneapolis 14, Minn. Entitled "Judge the Value Before You Buy," Bulletin No. 201 gives descriptive information and schedule of sizes and is illustrated by photographs of actual installations. (Key No. 377)
- A new brochure on Binfeed Stokers has been issued by Canton Stoker Corp., Andrew Place S.W., Canton, Ohio. In addition to general data on the advantages of stokers, the brochure has three blue prints showing the front view, side view and floor plan of an ideal boiler room layout. (Key No. 378)
- Twenty-five years of experience in commercial refrigerator manufacturing are summed up in the new 50 page booklet, "25 Years of Food Merchandising—The Tale of Tyler," released by Tyler Fixture Corporation, Niles, Mich. The booklet tells the story of food merchandising with text and illustrations and mentions use of Tyler equipment in colleges and other institutions. (Key No. 379)
- The latest instruments and radiochemicals for radioisotope applications in the medical, education, industrial and research fields are discussed in a new two color Condensed Catalog issued by Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10. (Key No. 380)
- "You Don't Walk On The Ceiling—But," is the title of a new piece of literature issued by the American Mat Corp., 2018 Adams St., Toledo 2, Ohio. It is designed to show that cleaning and maintenance costs can be substantially reduced by keeping entrance matting in place the year around. It also stresses the point that leaving mats in place in dry weather traps abrasive dry dirt at the entrance and prevents it damaging hard-surfaced floor coverings and carpets. (Key No. 381)

Suppliers' News

GoldE Manufacturing Co., manufacturer of audio-visual equipment, announces change of address from 1214 W. Madison St. to 4888 N. Clark St., Chicago 40.

Magnecord, Incorporated, manufacturer of professional magnetic recording equipment, announces removal of its offices from 360 N. Michigan Ave. to 225 W. Ohio St., Chicago 10.

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Don't you agree that a floor—particularly a school floor—ought to be something more than just a surface to walk on? Resilient Northern Hard Maple contributes much to structural strength. Its close-grained toughness fights the scuffs and scars of generations of young feet. Its easy brush-cleaning and simplicity of refinishing hold down maintenance costs. Its warmth of *feel* and warmth of *looks* add measurably to comfort. It doesn't splinter. It resists dents, gouges, abrasions. And—*there's always a new floor underneath*. Many, many floors and floor coverings of inferior materials are eventually replaced with Northern Hard Maple. It would save a good deal if Maple were laid originally. Not only MFMA Northern Hard Maple flooring, but its fine companion woods, MFMA Northern Beech and Birch, are readily available.



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Arch. (13k-MA) for specifications
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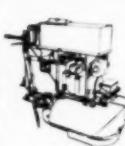
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Choose from the COMPLETE *Finnell* Line
More than a score of models and sizes
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However much a maintenance man may want to do a good job, and at the same time show savings in labor costs, he's stymied if the machine is too small, or too large, or is otherwise unsuited to the job. Different floors and areas call for different care and equipment. That's why *Finnell* makes more than a score of floor-maintenance machines. From this complete line, it is possible to choose equipment that is correct in size as well as model . . . that provides the maximum brush coverage consistent with the area and arrangement of the floors.

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